FLIR® | Right for Business

D3200/D3300 Series

Digital Video Surveillance Recorder

4/8/16/32 960H Real-time View & Record CMS Mobile Apps HDMI

Instruction Manual

English Version 4.0

www.flirsecurity.com/pro

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Thank you for purchasing this product. FLIR is committed to providing our customers with a high quality, reliable security solution.

This manual refers to the following models:

- D3200 Series
- D3300 Series

For the latest online manual, downloads and product updates, and to learn about our complete line of accessory products, please visit our website at:

www.flirsecurity.com/pro

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RICK OF ELECTRIC SHOCK DO NOT REMOVE COVER. NO USER SERVICABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the products' enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF THE PLUG TO THE WIDE SLOT AND FULLY INSERT.

Important Safeguards

In addition to the careful attention devoted to quality standards in the manufacture process of your product, safety is a major factor in the design of every instrument. However, safety is your responsibility too. This sheet lists important information that will help to ensure your enjoyment and proper use of the product and accessory equipment. Please read them carefully before operating and using your product.

General Precautions

1. All warnings and instructions in this manual should be followed.
2. Remove the plug from the outlet before cleaning. Do not use liquid aerosol detergents. Use a water-dampened cloth for cleaning.
3. Do not use this product in humid or wet places.
4. Keep enough space around the product for ventilation. Slots and openings in the storage cabinet should not be blocked.
5. It is highly recommended to connect the product to a surge protector to protect from damage caused by electrical surges. It is also recommended to connect the product to an uninterruptible power supply (UPS), which has an internal battery that will keep the product running in the event of a power outage.

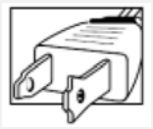
Installation

1. **Read and Follow Instructions** - All the safety and operating instructions should be read before the product is operated. Follow all operating instructions.

2. **Retain Instructions** - The safety and operating instructions should be retained for future reference.

3. **Heed Warnings** - Comply with all warnings on the product and in the operating instructions.

4. **Polarization** - Do not defeat the safety purpose of the polarized or grounding-type plug.

   A polarized plug has two blades with one wider than the other.

   A grounding type plug has two blades and a third grounding prong.

   The wide blade or the third prong are provided for your safety.

   If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

5. **Power Sources** - This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your location, consult your video dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

6. **Overloading** - Do not overload wall outlets or extension cords as this can result in the risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard. Periodically examine the cord, and if its appearance indicates damage or deteriorated insulation, have it replaced by your service technician.

7. **Power-Cord Protection** - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

8. **Surge Protectors** - It is highly recommended that the product be connected to a surge protector. Doing so will protect the product from damage caused by power surges. Surge protectors should bear the UL listing mark or CSA certification mark.

9. **Uninterruptible Power Supplies (UPS)** - Because this product is designed for continuous, 24/7 operation, it is recommended that you connect the product to an uninterruptible power supply. An uninterruptible power supply has an internal battery that will keep the product running in the event of a power outage. Uninterruptible power supplies should bear the UL listing mark or CSA certification mark.

   Caution: Maintain electrical safety. Power line operated equipment or accessories connected to this product should bear the UL listing mark or CSA certification mark on the accessory itself and should not be modified so as to defeat the safety features. This will help avoid any potential hazard from electrical shock or fire. If in doubt, contact qualified service personnel.

Installation (Continued)

10. **Ventilation** - Slots and openings in the case are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the product manufacturer's instructions have been followed.

11. **Attachments** - Do not use attachments unless recommended by the product manufacturer as they may cause a hazard.

12. **Water and Moisture** - Do not use this product near water — for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, near a swimming pool and the like.

13. **Heat** - The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

14. **Accessories** - Do not place this product on an unstable cart, stand, tripod, or table. The product may fall, causing serious damage to the product. Use this product only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product. Any mounting of the product should follow the manufacturer's instructions and use a mounting accessory recommended by the manufacturer.

15. **Camera Extension Cables** – Check the rating of your extension cable(s) to verify compliance with your local authority regulations prior to installation.

16. **Mounting** - The cameras provided with this system should be mounted only as instructed in this guide or the instructions that came with your cameras, using the provided mounting brackets.

17. **Camera Installation**- Cameras are not intended for submersion in water. Not all cameras can be installed outdoors. Check your camera environmental rating to confirm if they can be installed outdoors. When installing cameras outdoors, installation in a sheltered area is required.

Service

1. **Servicing** - Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

2. **Conditions Requiring Service** - Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

   A. When the power supply cord or plug is damaged.

   B. If liquid has been spilled or objects have fallen into the product.

   C. If the product has been exposed to rain or water.

   D. If the product has been dropped or the cabinet has been damaged.

   E. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.

   F. When the product exhibits a distinct change in performance. This indicates a need for service.

7. **Replacement Parts** - When replacement parts are required, have the service technician verify that the replacements used have the same safety characteristics as the original parts. Use of replacements specified by the product manufacturer can prevent fire, electric shock, or other hazards.

8. **Safety Check** - Upon completion of any service or repairs to this product, ask the service technician to perform safety checks recommended by the manufacturer to determine that the product is in safe operating condition.

Use

1. **Cleaning** - Unplug the product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

2. **Product and Cart Combination** - When product is installed on a cart, product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

3. **Object and Liquid Entry** - Never push objects of any kind into this product through openings as they may touch dangerous voltage points or "short-out" parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

4. **Lightning** - For added protection of this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power line surges.

NOTICES

FCC/IC Notice:

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

Modification:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

Toute modification non approuvée explicitement par le fournisseur de licence de l'appareil peut entraîner l'annulation du droit de l'utilsateur à utiliser l'appareil.

RoHS:

This product is fully compliant with the European Union Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment ("RoHS") Directive (2002/95/EC). The RoHS directive prohibits the sale of electronic equipment containing certain hazardous substances such as lead, cadmium, mercury, and hexavalent chromium, PBB, and PBDE in the European Union.

This product has been certified and found to comply with the limits regulated by FCC, EMC, and LVD. Therefore, it is designated to provide reasonable protection against interference and will not cause interference with other appliance usage.

However, it is imperative that the user follows the guidelines in this manual to avoid improper usage, which may result in damage to the product, electrical shock and fire hazard injury.

In order to improve the features, functions, and quality of this product, the specifications are subject to change without notice from time to time.

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Features

4/8/16-channel

32-channel

- 960H Super-Res (960x480) with real-time recording
- 34% greater resolution than standard D1
- True aspect ratio wide screen format, sharper, non-stretched image
- Looping, HDMI, VGA, Spot outputs
- CMS-D3 remote access SW, multi-site
- Mobile Apps: iPhone®, Android™, iPad®
- Fully PC/Mac compatible
- Pentaplex operation
- 4/8/16-channel: Supports 2x HDD (SATA, 2TB) up to 4TB capacity
- 32-channel: Supports 8x HDD (SATA, 3TB) up to 24TB capacity
- FLIR DDNS service included
- Supports USB 2.0 or eSata back-up
- Auto Port Forwarding wizard for easy remote connection
- Supports RS485 (PTZ), Audio I/O, Alarm I/O

TABLE OF CONTENTS

Getting Started 1
Front Panel (4/8/16-Channel) 2
D3332 (32-Channel) 3
Rear Panel 4
D3304 (4-Channel) 4
D3308 (8-Channel) 4
D3316 (16-Channel) 5
D3216 (16-Channel) 6
D3332 (32-Channel) 7
Basic Setup 8
Step 1: Connect the BNC Cameras 8
Step 2: Connect the Mouse 8
Step 3: Connect the Ethernet Cable 8
Step 4: Connect the Monitor 9
Step 5: Connect the Power Adapter and Power on the DVR 9
Default System Password & Port Numbers 9
Quick Access to System Information 10
Mouse Control 11
Remote Control 12
Setting the Remote Control ID (D3332/D3316 Only) 13
Using the On-Screen Display 14
Using the Menu Bar 15
Menu Bar Icons 15
Using the Virtual Keyboard and Mini-Keyboard 16
Using the Zoom Mode 17
Using Picture in Picture (PIP) Mode 18
Setting the Date and Time 19
Configuring Daylight Savings Time (DST) 20
Using a NTP Server to set your System Time 21
Recording 22
Event Recording 22
Recording Audio 22
Playback and Backup 23
Playing Back Recorded Video 23

Using Playback Controls . . . 25
Finding Events in the Playback Bar . . . 25
Controlling the Time Range of the Playback Bar . . . 26
Using Zoom in Playback Mode . . . 26
Using Video Clip Backup . . . 27
Backing Up Video . . . 28
Viewing Backed Up Video . . . 29
Converting Backed Up Video to AVI Files . . . 29
Managing Passwords . . . 31
Enabling and Changing Passwords . . . 31
Adding Users . . . 32
Using the Main Menu . . . 34
Display . . . 35
Configuring Custom Channel Names . . . 35
Changing the Position of the Channel Name . . . 35
Adjusting Camera Color Settings . . . 35
Enabling Covert Recording . . . 35
Configuring the Time and Recording Time Display . . . 36
Configuring Sequence Time . . . 36
Changing the Video-out Resolution . . . 36
Restoring the System's Resolution if you see a Blank Screen . . . 36
Adjusting Menu Transparency . . . 36
Adjusting the Video Margin . . . 37
Adding Privacy Zones . . . 37
Creating a Custom Split-screen Display . . . 38
Record . . . 39
Configuring Pre-recording Settings . . . 39
Configuring Backup File Duration (Pack Duration) . . . 39
Configuring the Recording Schedule (Continuous, Motion, Alarm) . . . 39
Enabling Audio Recording . . . 40
Configuring Recording Quality, Resolution, and Video Frame Rate . . . 40
Search . . . 41
Searching for Video on the System . . . 41
Backing up Video Files . . . 42
Using the Event Search . . . 42
Using the Log Search . . . 43
Network . . . 43
Configuring Network Type: DHCP & Static IP . . . 43
Enabling Auto Port Forwarding . . . 44
Changing the DVR's Client and HTTP Port . . . 44
Adjusting Remote Connectivity Streaming Rates . . . 44
Setting up Email Notification . . . 45
Configuring DDNS settings . . . 45
Alarm . . . 46
Configuring Motion Detection . . . 46
Configuring Alarm Settings . . . 46

Device 47
Configuring Hard Drive settings 47
Formatting USB Flash Drives 48
Formatting eSATA Backup Drives 48
System 48
Changing Date Format 48
Changing Time Format 49
Changing the System Language 49
Changing Video Output - NTSC & PAL 49
Configuring Menu Time Out and Auto Logout 49
Adding Users & Changing the Admin Password 49
Viewing System Information 49
Advanced 49
Configuring the "Auto Reboot" feature 49
Upgrading the System Firmware 50
Restoring to Factory Default Settings 50
Restarting or Shutting Down the DVR 51
Configuring System Warnings 51
Saving Your System Configuration to a USB Flash Drive 52
Loading a System Configuration from a USB Flash Drive 52
Setting up your DVR for Remote Connectivity **53**
System Requirements 53
Accessing your DVR within a local network (LAN) 54
Step 1 of 3: Connect your DVR to the Local Area Network 54
Step 2 of 3: Obtain the DVR's Local IP Address 54
Step 3 of 3: Connect to the DVR's Local IP Address 55
To connect using the DVR's local IP address on a PC: 55
To connect to the DVR's local IP address on a Mac: 55
Accessing your DVR Remotely over the Internet 56
Step 1 of 4: Port Forwarding 57
Step 2 of 4: Create a DDNS Account 57
Step 3 of 4: Enable DDNS on the DVR 58
Step 4 of 4: Connect to the DDNS Address 59
To Connect to the DDNS Address Using the Client Software on PC: 59
To Connect to the DDNS Address Using Safari on Mac 59
Remote Viewing Interface **60**
Changing Viewing Modes 61
Taking Screen Shots 61
Recording Video 62
Showing / Hiding Channels 63
Adjusting Sub-menu Options 63
Changing the Save Directory of Screenshots or Recorded Video 64
Changing the Format of Recorded Video (PC Only) 64
Configuring PTZ Settings 65
Video Playback 67
Video Playback Controls 68

Configuring Display Settings 68
Configuring Privacy Zone Settings 69
Configuring Recording Parameters 70
Configuring the Recording Schedule 70
Configuring System Recording Quality 71
Configuring Basic Network Settings 71
Configuring the System Substream 72
Configuring Email Notification Settings 73
Configuring DDNS Settings 74
Configuring Motion Detection Settings 74
Configuring your System to "Beep" During Motion 75
Configuring Alarm Notifications 76
Configuring Hard Drive Recording Mode 77
Configuring PTZ Parameters 77
Configuring the System Time and Date 78
Changing the System's Menu Time Out 78
Configuring System User Accounts 78
Viewing System Information 80
Upgrading System Firmware 80
Restoring Default Settings 81
Configuring Event Settings 81
Configuring Auto-Reboot 82

CMS-D3 Central Management Software 83

System Requirements 83
Installing CMS-D3 84
Adding DVRs 84
Adding a DVR from the local area network (LAN) 84
Adding a DVR using a DDNS address 87
Control Panel 90
Main View 91
Using Multiple Windows or Monitors 93
Using Sequence Mode 94
Using PTZ Controls 95
Remote Playback 97
Remote Playback Controls 99
Downloading Video Files 100
Group Device Management 100
Modifying DVRs 101
Deleting DVRs 101
Remotely Configuring DVRs 102
Creating Camera Groups 102
Modifying Camera Groups 103
Deleting Camera Groups 103
Local Log Search 103

Backing up Logs . . . 104
Account Management . . . 105
Enabling Passwords for the Admin Account . . . 105
Adding User Accounts . . . 106
Modifying User Accounts . . . 106
Deleting User Accounts . . . 107
Using File Management . . . 107
Video Player . . . 108
Opening Backup or Downloaded Video Files . . . 108
Video Player Controls . . . 109
System Configuration . . . 110
General . . . 110
File . . . 111
Alarm Sound . . . 111
FLIR Player: Playing Backed up Video on PC . . . 112
Installing FLIR Player . . . 112
Running FLIR Player . . . 112
FLIR Player Interface Overview . . . 113
About the Advanced Config menu . . . 113
FLIR Mac Player: Viewing Backed up Video on Mac . . . 114
FLIR Mac Player Interface . . . 114
Loading Individual Video Files . . . 115
Loading Multiple Video Files . . . 115
Remote Viewing on Internet Explorer . . . 116
Mobile Apps: Accessing your DVR Using a Mobile Device . . . 118
Compatible Devices and Platforms . . . 118
Before you Begin . . . 118
iPhone . . . 118
System requirements . . . 118
Prerequisites . . . 119
Connecting to your System Using Digi Summit . . . 119
Digi Summit Interface . . . 121
Using Remote Playback Mode on iPhone . . . 123
Viewing Screenshots . . . 125
Viewing Manual Recordings . . . 125
Using Device Manager to Manage DVR's . . . 126
iPad . . . 127
System requirements . . . 127
Prerequisites . . . 127
Connecting to your System Using Digi SummitHD . . . 127
Digi Summit Interface . . . 129
Using Remote Playback Mode on iPad . . . 130
Viewing Screenshots . . . 132
Viewing Manual Recordings . . . 133
Using Device Manager to Manage DVR's . . . 134

Managing Favorites . . . 135
Android . . . 135
System requirements . . . 135
Prerequisites . . . 135
Connecting to your System Using Digi Summit . . . 135
Digi Summit Interface. . . . 137
Using Remote Playback Mode on Android . . . 139
Viewing Screenshots . . . 141
Viewing Manual Recordings . . . 142
Using Device Manager to Manage DVR's . . . 142
Appendix A: System Specifications . . . 144
Appendix B: Connecting a PTZ Camera . . . 147
Configuring PTZ Settings . . . 147
Using the PTZ Menu (Local DVR) . . . 148
PTZ Presets and PTZ Cruise . . . 149
Setting PTZ Presets . . . 149
Selecting PTZ Presets . . . 149
Deleting PTZ Presets . . . 149
Starting / Stopping PTZ Cruise . . . 149
Appendix C: Connecting Additional External Monitors . . . 150
Customizing the Channel Arrangement on the External Monitor . . . 150
Main and Spot Video Outputs (D3316/D3332 Only) . . . 152
Configuring the Spot Monitor for Full-Screen or Split-Screen . . . 152
Appendix D: Recording Audio . . . 154
Appendix E: Replacing the Hard Drive . . . 155
Removing the Hard Drive . . . 155
Installing the Hard Drive . . . 156
Installing Hard Drives (D3332) . . . 158
Formatting the Hard Drive . . . 161
Troubleshooting . . . 162
Troubleshooting Remote Connections . . . 164

Getting Started

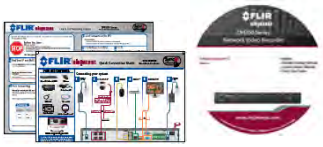
The system comes with the following components:

DVR (DIGITAL VIDEO RECORDER)

12V DC POWER SUPPLY*
(may not be exactly as shown)

REMOTE CONTROL

USB MOUSE



QUICKSTART GUIDES
DOCUMENTATION CD

OCTOPUS CABLE
ONLY INCLUDED WITH:
D3316 (X2)
D3332/3216 (X1)

*32-channel models include a built-in power supply and an AC power cable.

HARD DRIVE SIZE, NUMBER OF CHANNELS, AND CAMERA CONFIGURATION MAY VARY BY MODEL. PLEASE REFER TO YOUR PACKAGE FOR SPECIFIC DETAILS.

CHECK YOUR PACKAGE TO CONFIRM THAT YOU HAVE RECEIVED THE COMPLETE SYSTEM, INCLUDING ALL COMPONENTS SHOWN ABOVE.

Front Panel (4/8/16-Channel)

1 **IR Sensor**: IR receiver for the remote control.
LED Indicators:
- **PWR**: Power LED.
- **HDD**: Hard disk activity LED.

2 **Menu & Playback Controls**:
- ◀◀ : In Playback Mode, press to rewind. Press repeatedly to increase rewind speed.
- ▶ II : In Playback Mode, press to play / pause video.
  - In Viewing mode, press to open Search Menu to select playback time.
- ▶▶: In Playback Mode, press to fast forward. Press repeatedly to increase fast forward speed.
- ■ : In Playback Mode, press to stop video playback.
  - In Live Viewing Mode, press to stop DVR recording. Password required; does not override scheduled recording.
- ● : Press to stop / resume recording. When the channel displays a red box with the letter "C", the channel is recording.
- **Menu / Esc**: Opens the system menu. In menus, press to go back / exit menus.

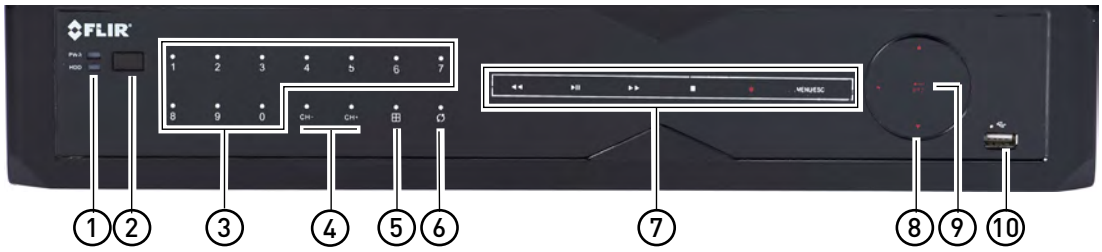
3 **Channel Controls**:
- **Ch1 ~ Ch0**: Press to view channel in Full-screen View.
- (16-Channel models) To access channels 10 and greater: Press **0** for channel 10 or 1+0 for channel 10, 1+1 for channel 11, 1+2 for channel 12, etc.
- ▦: In Live Viewing Mode, press repeatedly to switch between Split-screen Viewing modes.

4 **Navigation Buttons**:
- ▲: Press to move cursor up.
- ▼: Press to move cursor down.
- ◀: Press to move cursor left.
- ▶: Press to move cursor right.

5 **PTZ/** ↵ :
- **Within system menus:** Press to confirm a selection.
- **To open the System Information window:** In Live Viewing mode, press once.
- **To open PTZ Controls:** In Live Viewing Mode, press once and release then press and hold.

6 **USB Port**: Connect a USB mouse (included) or USB flash drive (not included) for data backup or firmware updates.

D3332 (32-Channel)



1 **LED Indicators**:
- **PWR**: Power LED.
- **HDD**: Hard disk activity LED.

2 **IR Sensor:** IR receiver for the remote control.

3 **Ch1 ~ Ch0**: Press to view channel in Full-screen View. To access channels 10 and greater: Press **0** for channel 10 or 1+0 for channel 10, 1+1 for channel 11, 1+2 for channel 12, etc.

4 **CH-/CH+:** Press to select previous/next channel.

5 : Press to open split-screen view. Press multiple times to select split-screen mode.

6 : Press to start/stop Sequence Mode.

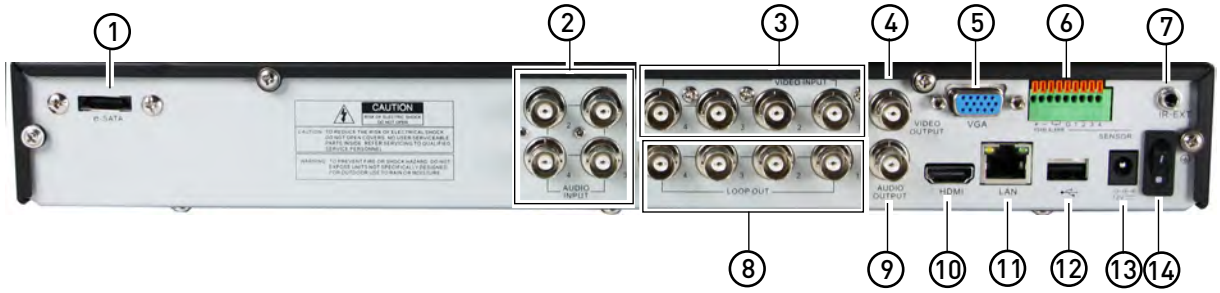
7 **Menu & Playback Controls**:
- : In Playback Mode, press to rewind. Press repeatedly to increase rewind speed.
- : In Playback Mode, press to play / pause video.
  - In Viewing mode, press to open Search Menu to select playback time.
- : In Playback Mode, press to fast forward. Press repeatedly to increase fast forward speed.
- : In Playback Mode, press to stop video playback.
  - In Live Viewing Mode, press to stop DVR recording. Password required; does not override scheduled recording.
- : Press to stop / resume recording. When the channel displays a red box with the letter "C", the channel is recording.
- **Menu / Esc**: Opens the system menu. In menus, press to go back / exit menus.

8 **Navigation Buttons**:
- : Press to move cursor up.
- : Press to move cursor down.
- : Press to move cursor left.
- : Press to move cursor right.

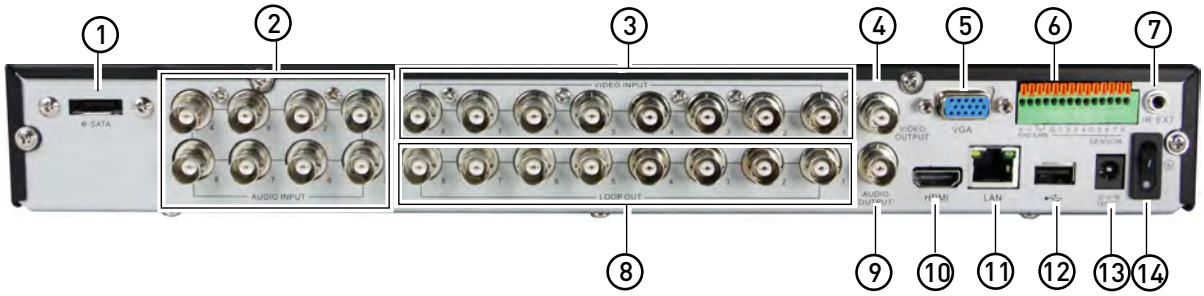
9 **PTZ/** :
- **Within system menus:** Press to confirm a selection.
- **To open the System Information window:** In Live Viewing mode, press once.
- **To open PTZ Controls:** In Live Viewing Mode, press once and release then press and hold.
- **USB Port**: Connect a USB mouse (included) or USB flash drive (not included) for data backup or firmware updates.

Rear Panel

D3304 (4-Channel)



D3308 (8-Channel)



1 **eSATA:** Connect a self-powered eSATA external hard drive (not included) for data backup.

2 **Audio Input**: BNC inputs for audio-enabled cameras (not included) or self-powered microphones (not included).

3 **Video Input**: Connect BNC cameras.

4 **Video Output**: BNC output for external monitor.

5 **VGA**: Connect a VGA monitor (not included) to view the system interface.

6 **PTZ / Alarm Block**: Connect compatible PTZ cameras (not included) or alarm devices (not included).

7 **IR-EXT**: Service only; not supported.

8 **Loop Out:** BNC outputs to connect each channel to a Loop Out monitor.

9 **Audio Output**: BNC output for 1 audio channel (e.g. speakers).

10 **HDMI**: Connect to a HDMI-compatible TV or monitor (not included) to view the system interface.

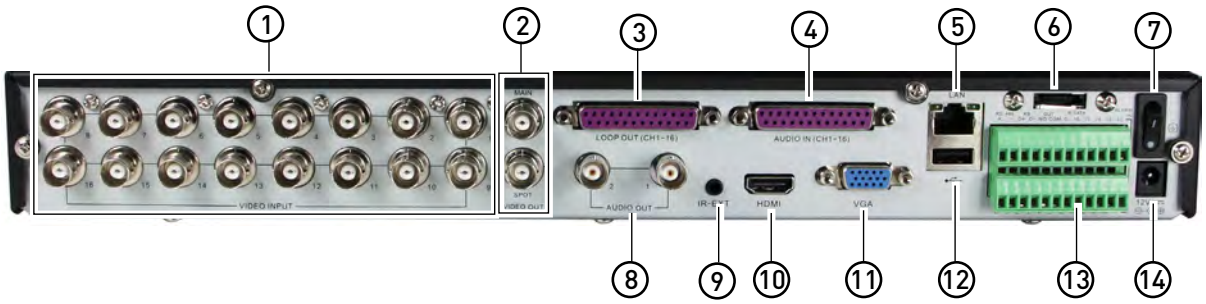
11 **LAN**: Connect a CAT 5 RJ45 Ethernet cable for local and remote connectivity.

12 **USB Port**: Connect a USB mouse (included) or USB flash drive (not included) for data backup or firmware updates.

13 **DC12V**: Connect the included AC power adapter.

14 **On / Off Switch**: Turns the DVR on or off.

D3316 (16-Channel)



1 **Video Input**: Connect BNC cameras.

2 **Video Out:** BNC outputs for external or spot monitors.

3 **Loop Out (CH1~16):** Connect included Octopus cable to connect channels to Loop Out monitors.

4 **Audio In (CH1~16):** Connect included Octopus cable to connect audio-enabled cameras (not included) or self-powered microphones (not included).

5 **LAN**: Connect a CAT 5 RJ45 Ethernet cable for local and remote connectivity.

6 **eSATA:** Connect a self-powered eSATA external hard drive (not included) for data backup.

7 **On / Off Switch**: Turns the DVR on or off.

8 **Audio Out**: BNC output for 2 audio channels (e.g. speakers).

9 **IR-EXT**: Service only; not supported.

10 **HDMI**: Connect to a HDMI-compatible TV or monitor (not included) to view the system interface.

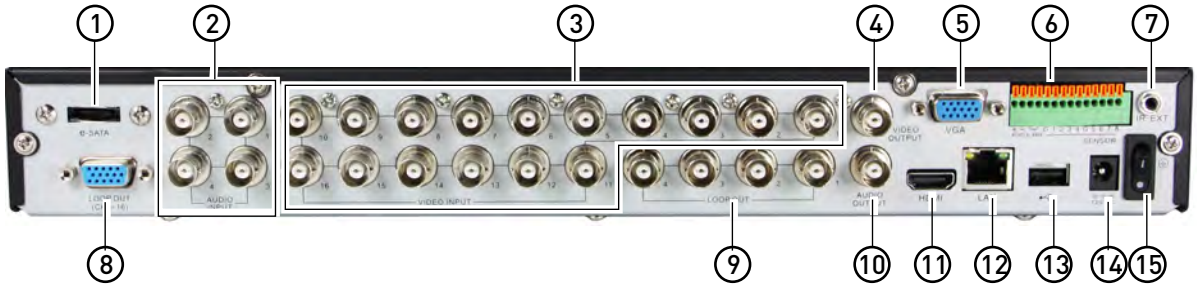
11 **VGA**: Connect a VGA monitor (not included) to view the system interface.

12 **USB Port**: Connect a USB mouse (included) or USB flash drive (not included) for data backup or firmware updates.

13 **PTZ / Alarm Block**: Connect compatible PTZ cameras (not included) or alarm devices (not included).

14 **DC12V**: Connect the included AC power adapter.

D3216 (16-Channel)



1 **eSATA:** Connect a self-powered eSATA external hard drive (not included) for data backup.

2 **Audio Input**: BNC inputs for audio-enabled cameras (not included) or self-powered microphones (not included).

3 **Video Input**: Connect BNC cameras.

4 **Video Output**: BNC output for external monitor.

5 **VGA**: Connect a VGA monitor (not included) to view the system interface.

6 **PTZ / Alarm Block**: Connect compatible PTZ cameras (not included) or alarm devices (not included).

7 **IR-EXT**: Service only; not supported.

8 **Loop Out 5~16:** Connect Octopus cable to connect channels 5~16 to a Loop Out monitor.

9 **Loop Out 1~4:** BNC outputs to connect channels 1~4 to a Loop Out monitor.

10 **Audio Out**: BNC output for 1 audio channel (e.g. speakers).

11 **HDMI**: Connect to a HDMI-compatible TV or monitor (not included) to view the system interface.

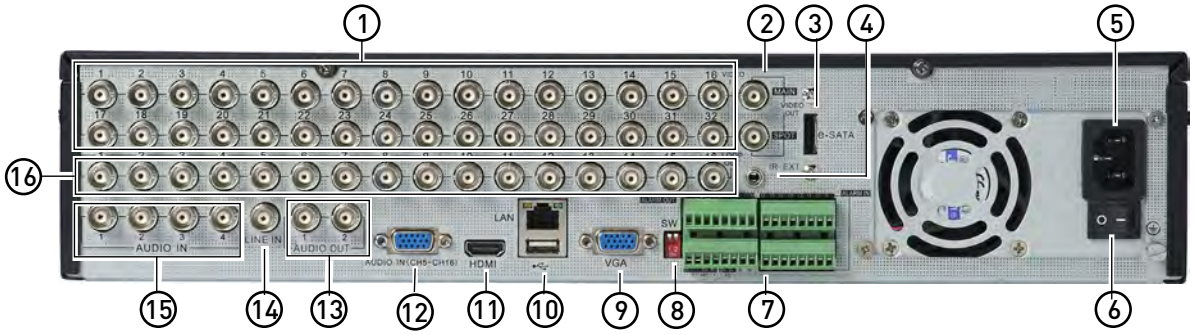
12 **LAN**: Connect a CAT 5 RJ45 Ethernet cable for local and remote connectivity.

13 **USB Port**: Connect a USB mouse (included) or USB flash drive (not included) for data backup or firmware updates.

14 **DC12V**: Connect the included AC power adapter.

15 **On / Off Switch**: Turns the DVR on or off.

D3332 (32-Channel)



1 **Video Input**: Connect BNC cameras.

2 **Video Output**: BNC output for external or spot monitors.

3 **eSATA:** Connect a self-powered eSATA external hard drive (not included) for data backup.

4 **IR-EXT**: Service only; not supported.

5 **AC Input**: Connect the included AC power cable.

6 **On / Off Switch**: Turns the DVR on or off.

7 **PTZ / Alarm Block**: Connect compatible PTZ cameras (not included) or alarm devices (not included).

8 **Not supported**

9 **VGA**: Connect a VGA monitor (not included) to view the system interface.

10 **LAN**: Connect a CAT 5 RJ45 Ethernet cable for local and remote connectivity.

- **USB Port**: Connect a USB mouse (included) or USB flash drive (not included) for data backup or firmware updates.

11 **HDMI**: Connect to a HDMI-compatible TV or monitor (not included) to view the system interface.

12 **Audio In 5~16:** Connect Octopus cable to connect audio-enabled cameras (not included) or self-powered microphones (not included) to channels 5 through 16.

13 **Audio Out**: BNC output for 2 audio channels (e.g. speakers).

14 **Line in:** Service only; not supported.

15 **Audio In**: BNC inputs for audio-enabled cameras (not included) or self-powered microphones (not included) connected to channels 1 through 4.

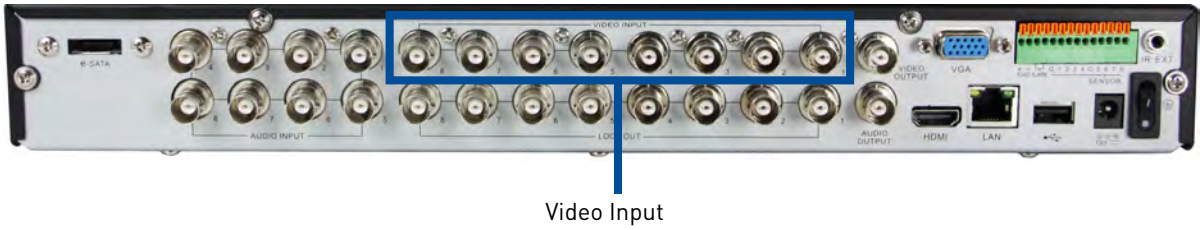
16 **Loop Out 1~16:** BNC outputs to connect channels 1~16 to a Loop Out monitor.

Basic Setup

Step 1: Connect the BNC Cameras

- Connect BNC cameras to the **Video Input** ports on the rear panel of the DVR.

8-channel model shown



Step 2: Connect the Mouse

- Connect a USB mouse (included) to one of the **USB** ports.

8-channel model shown

Step 3: Connect the Ethernet Cable

- Connect an ethernet cable (not included) to the **LAN** port on the rear panel of the DVR. Connect the other end of the ethernet cable to a router on your network.

8-channel model shown

Step 4: Connect the Monitor

- Connect an HDMI cable (not included) from the **HDMI** port to the TV or monitor (recommended) **OR**;
- Connect a VGA cable (not included) from the **VGA** port to the monitor.

8-channel model shown

Step 5: Connect the Power Adapter and Power on the DVR

- Connect the included power adapter to the **DC 12V** port. Connect the end of the power adapter to a wall socket or a surge protector.
- Turn the power switch to **I** to turn on the DVR. At startup, the system performs a basic system check and runs an initial loading sequence. After a few moments, the system loads a live display view.

8-channel model shown

Default System Password & Port Numbers

By default, the system user name is **admin** and the password is **000000**. Passwords are enabled by default and are required to access the Menu Bar or Main Menu. It is essential that you create your own password. For details, see "Managing Passwords" on page 31.

- The system requires a user name and password to log in to the system **remotely** using a computer or mobile device.
- **ALL** the system port numbers below must be port forwarded on your router to log in to your system over the Internet or an internal network (LAN).

Local DVR user name and password:

- Username: **admin** / Password: **000000**

Default ports for remote access:

- Port **80** (HTTP port)
- Port **9000** (Client port)

Remote connectivity (LAN & Internet) to the DVR:

- User Name: **admin**
- Password: **000000**

Quick Access to System Information

- To quickly open a window that displays vital system information, press the **PTZ** / ↵ button on the front panel of the system.

Mouse Control

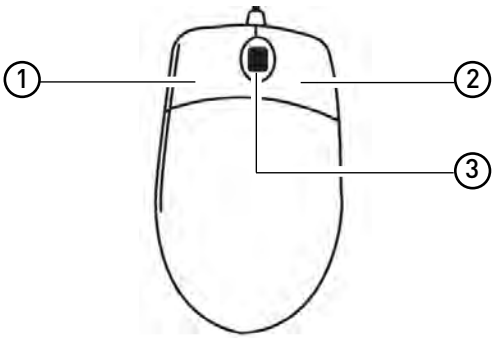
The DVR is designed for mouse navigation. To use a USB mouse (included), connect the mouse to a **USB** port on the rear panel of the DVR.

8-channel model shown

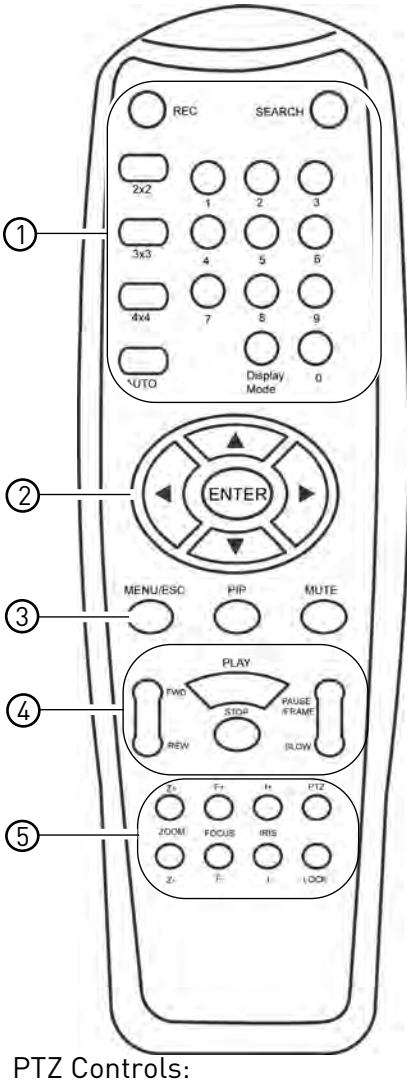
1 Use the mouse buttons to perform the following:
- **Left-Button**: Click to select a menu option. During live viewing in Split-screen View, double-click on a channel to view the selected channel in full-screen; double-click the channel again to return to Split-screen View.

2 **Right-Button**:
- Click to open the Menu Bar (see "Using the Menu Bar" on page 15).
- In menus, use the right-button to go back / exit menus.

3 **Scroll-Wheel**: No function.



Remote Control



1 **REC:** Press to resume recording after recording has been stopped.

- **SEARCH**: Press to open the Search menu.

NOTE: On D3332 and D3316, this button controls ID function for remote control. For details, see "Setting the Remote Control ID (D3332/D3316 Only)" on page 13.

- **Number Keys (1-0)**: In Live Viewing Mode, press to open the desired channel in Full-screen view. Press 1+0 for channel 10, 1+1 for channel 11, etc.
- **0**: Press **0** three times to show the mouse cursor on the BNC monitor or the monitor connected with HDMI / VGA.
- **Display Mode**: In Live Viewing Mode, press repeatedly to switch through split-screen viewing modes.
- **2x2 / 3x3 / 4x4**: In Live Viewing Mode, press to open the corresponding Split-screen View. Press repeatedly to change channels shown in split-screen.
- **AUTO**: Press to start / stop Sequence Mode.

2 **Navigation Cursors**: Press to navigate menus.

- **ENTER**: In menus, press to confirm selections.
  - In Live Viewing Mode, press to access System Information.

3 **MENU/ESC**: Press to open the system menu. In menus, press to go back / exit menu.

- **MUTE**: In Live Viewing and Playback Modes, press to mute / un-mute audio.
- **PIP**: In Live Viewing Mode, press once to open Picture in Picture (PIP) 1X1 or twice to open PIP 1X2. Mouse is required to change channels shown in PIP.

4 **Playback Controls**:

- **FWD**: In Playback Mode, press to fast forward / increase fast forward speed.
- **REW**: In Playback Mode, press to rewind / increase rewind speed.
- **PLAY**: In Playback Mode, press to play / pause video.
  - In Live Viewing Mode, press to open the Record Search Menu.
- **STOP**: In Playback Mode, press to pause playback.
  - In Live Viewing Mode, press to stop recording. Password required; does not override scheduled recording.

5 PTZ Controls:

- **Z+/Z-** : Adjust camera Zoom.
- **F+/F-** : Adjust camera Focus
- **I+/I-**: Adjust camera Iris.
- **PTZ**: Opens the PTZ menu.

- **SLOW**: In Playback Mode, press to play video in slow motion. Press repeatedly to change slow motion playback speed.
- **PAUSE/FRAME**: In Playback Mode, press to pause. Press repeatedly to view recordings frame by frame.

Setting the Remote Control ID (D3332/D3316 Only)

If you have more than one DVR, you can use the ID function to pair the remote control with a specific DVR.

To pair the remote control:

1 On the DVR, right-click to open the menu bar and click .

2 Enter the DVR user name (default: **admin**) and password (default: **000000**).

3 Click **System→Control Device**.

4 Under **System ID**, enter the desired ID number.

5 Click **Apply** to save your settings. Right-click repeatedly to return to live view.

6 On the remote control press **ID**, then press the ID number you entered in step 4 and press **Enter** to confirm.

NOTE: You do not need to enter 0's in the ID for unused digits. For example, if the ID is "004," press **ID→4→Enter**.

Using the On-Screen Display

Use the system's graphical on-screen display to navigate menus and configure options and settings.

1 **Date & Time**: Displays the date and time on the system

2 **Record Status**: Displays the current recording status of the system: **C**=continuous (normal recording); **M**=motion recording; **A**=alarm recording.

3 **Channel number / Channel title**: Displays channel number or channel title. To rename the channel number to a title, see "Configuring Custom Channel Names" on page 35.

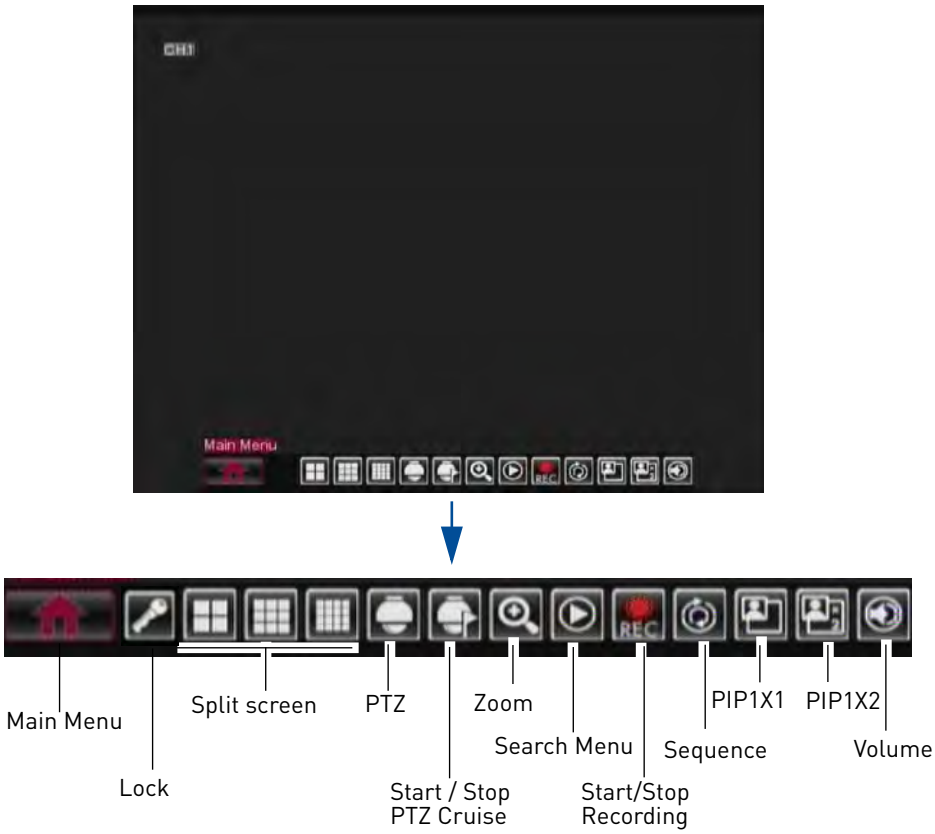
Tip:
If you can't see your mouse cursor on screen:
You may have switched output modes from VGA/HDMI to BNC. By default, the DVR outputs to VGA/HDMI mode. To change the video output, press **0** three times on the remote control.

Using the Menu Bar

The Menu Bar allows you to access the Main Menu and control basic functions of the DVR.

To access the Menu Bar:

1 Right-click or move the mouse cursor to the bottom of the screen to access the Menu Bar.



Menu Bar Icons

- **Main Menu**: Opens the Main Menu.
- **Lock**: Click to lock the Main Menu unless the password is entered. Lock icon is not visible unless passwords are enabled.
- **Split Screen buttons**: Select split-screen layout.
- **PTZ**: Opens the PTZ controls.
- **Start / Stop PTZ Cruise**: Start or stop the PTZ cruise function.
- **Zoom**: Opens digital zoom. Must be in Full-screen / Live Viewing Mode.
- **Record Search**: Opens the DVR Search Menu. This allows you to search for video recorded on the DVR.
- **Start / Stop Recording**: Start or stop DVR recording on all channels. Password required; does not override scheduled recording.
- **Start / Stop SEQ**: Start or stop Sequence Mode. In Sequence Mode, DVR automatically switches between channels every few seconds.
- **PIP 1X1**: Enable Picture in Picture Mode with 1 camera in full screen and 1 in a small window.
- **PIP 1X2**: Enable Picture in Picture Mode with 1 camera in full screen and 2 in small windows.
- **Volume**: Adjust the DVR volume (audio-capable cameras required, not included).

Using the Virtual Keyboard and Mini-Keyboard

You can input numeric or text values using the on-screen virtual keyboard. You will need to use the Virtual Keyboard when entering your User ID and Password. The Virtual Mini-Keyboard is used to input numeric values, such as the time and date.

To use the Virtual Keyboard:

1 Using the mouse, click on an option or field, such as the User ID and Password fields (if passwords are enabled).

- The Virtual Keyboard opens.

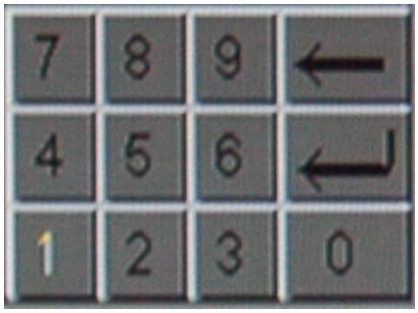
Virtual Keyboard

- Click **Shift** to switch between upper and lowercase letters.
- Click ◄ ► to move the cursor between letters.
- Click ← to backspace/delete.
- Click **Enter** to enter your selection.
- Click **ESC** to close the virtual keyboard.

To use the Virtual Mini-Keyboard:

1 Using the mouse, click on an option or field, such as the Time or Date fields.

- The Virtual Mini-Keyboard opens.



Virtual Mini-Keyboard

- Click ← to go back to the previous option.
- Click ↵ to enter your selection.

Using the Zoom Mode

Zoom Mode allows you to zoom in on an image while viewing your cameras live. This can be useful if you want to get a closer look at a situation.

To use the Zoom Mode:

1 In Live Viewing Mode, select the channel you want to zoom in on in full-screen (double-click the channel if you are in a Split-screen View).

2 Right-click to open the Menu Bar and select the Zoom button ( ). A Zoom icon appears on the screen.

3 Click and drag on the area of the screen you would like to enlarge. The image zooms in on the selected area.

2012-02-15 11:45:26 PM
ZOOM
Click and drag to zoom in on an area
Zoom icon
Click and drag inside the box to move the zoom area
Right-click to exit and select a different zoom area

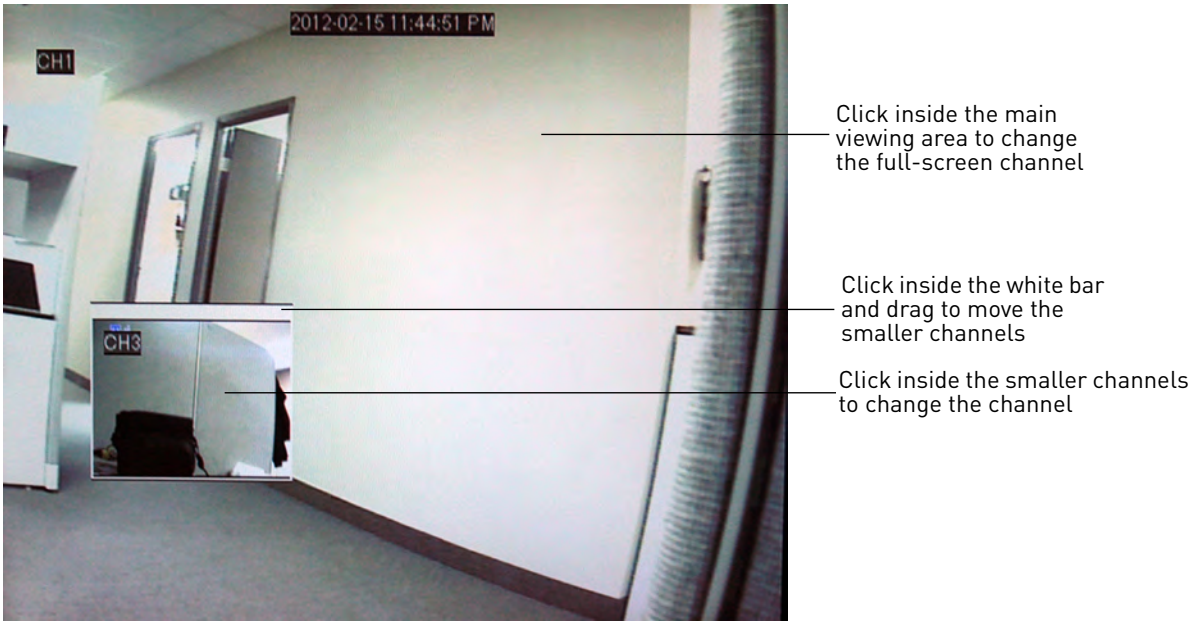
- The box in the lower right-hand corner shows the entire camera picture with a black box around the zoomed-in area.
- Click inside the box and drag to move the zoom area.
- Right-click to exit and select a different zoom area. Right-click again to exit Zoom Mode and return to Live Viewing Mode.

Using Picture in Picture (PIP) Mode

Picture in Picture (PIP) Mode allows you to view one channel in full-screen while viewing up to two other channels.

To use Picture in Picture Mode:

1 Right-click to open the Menu Bar and select the PIP1X1 button ( ) or PIP1X2 button ( ). PIP1X1 shows 1 channel in full screen and 1 other channel; PIP1X2 shows 1 channel in full screen and 2 other channels.


2012-02-15 11:44:51 PM
CH1
CH3
Click inside the main viewing area to change the full-screen channel
Click inside the white bar and drag to move the smaller channels
Click inside the smaller channels to change the channel

- Picture in Picture Mode opens.
- To change the full-screen channel, click anywhere in the main viewing area.
- To change the smaller channels, click inside the channel.
- To move the smaller channels around the screen, click inside the white bar and drag.
- Right-click to exit and return to Live Viewing Mode.

Setting the Date and Time

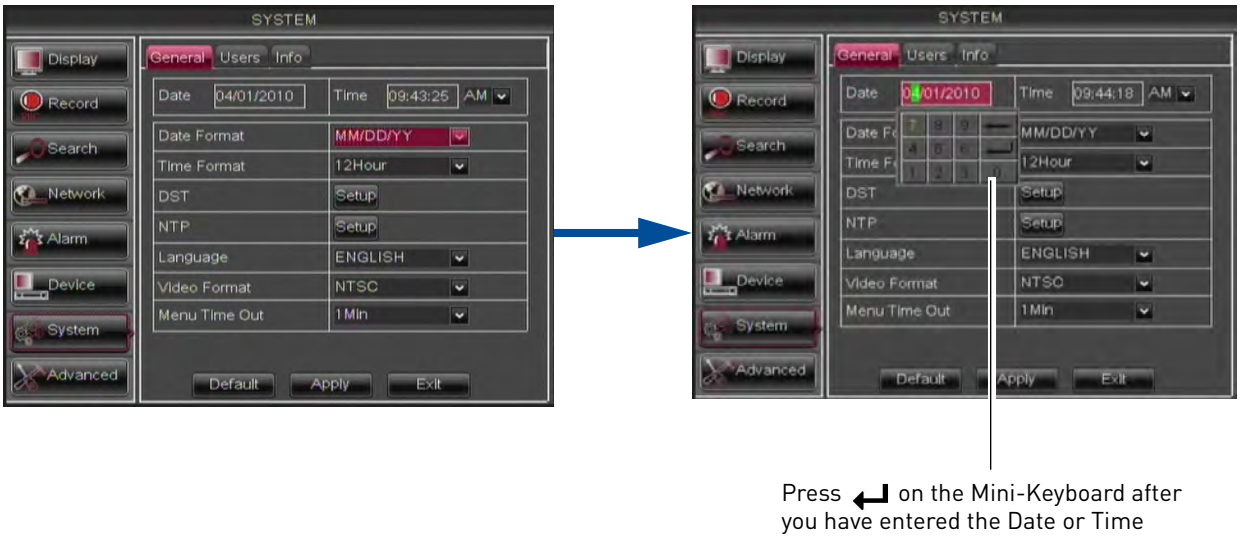
It is highly recommended to set the date and time when first setting up your system.

Inaccurate time stamps may render your footage unusable for court evidence.

To set the date and time:

1 Right-click or move your mouse to the bottom of the screen to open the Menu Bar and click the Main Menu button ( ).

2 Click **System.**



3 Configure the following:

- **Date**: Click inside the field and enter the month, date, and year.
- **Time**: Click inside the field and enter the time.
- **(Optional) Date Format**: Use the drop-down menu to select **MM/DD/YY** or, **DD/MM/YY**, or **YY-MM-DD**.
- **(Optional) Time Format**: Use the drop-down menu to select **12HOURS** or **24HOURS**.
- **(Optional) DST**: Click the **Setup** button next to DST to configure automatic Daylight Savings Time adjustments.
- **(Optional) NTP**: Click the **Setup** button next to NTP to synchronize your DVR's time and date with a Network Time Protocol (NTP) time server.

NOTE: A constant internet connection is required for the NTP server feature to function.

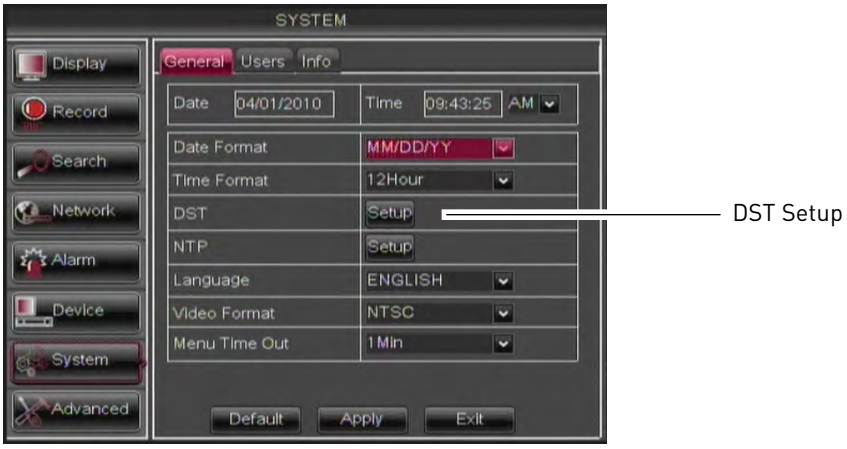
4 Click **Apply** to save your settings.

Configuring Daylight Savings Time (DST)

If your region observes Daylight Savings Time (DST), follow the instructions below to configure your DVR to automatically update the time when the clock updates.

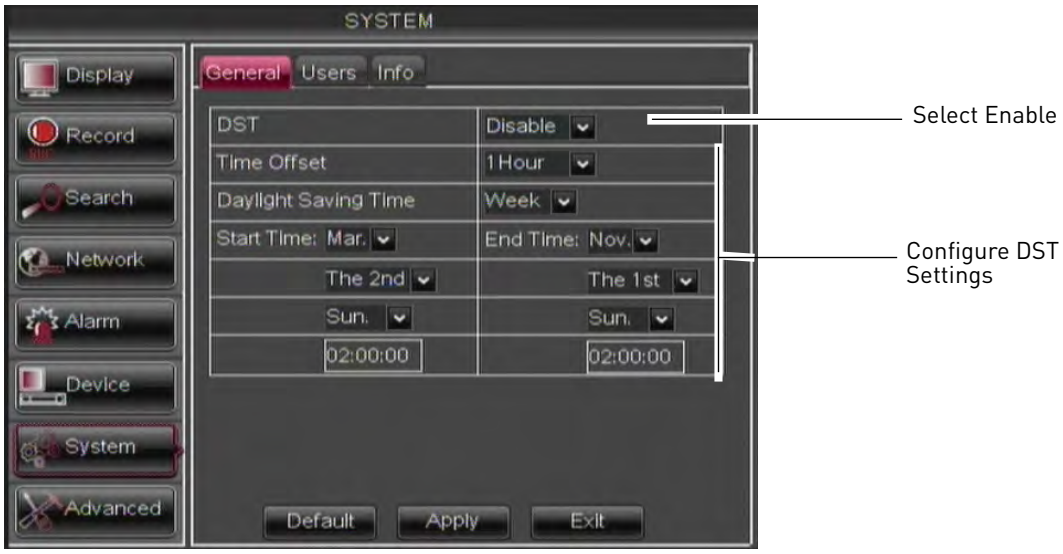
To enable automatic DST adjustments:

1 Click the **DST Setup** button.



2 Configure the following:

- **Daylight Saving Time**: Select **Enable**.
- **Time Offset**: Select the number of hours the system should move forward or backward when DST occurs.
- **Daylight Saving Time Mode**: Select **Week** or **Date**. This allows you to select whether DST should begin and end at the beginning of the week or on a specific date.
- **Start Time, End Time**: Enter when DST starts and ends.



3 Click **Apply** to save your settings.

Using a NTP Server to set your System Time

A NTP (Network Time Protocol) server syncs your system time with an online time server.

NOTE: A constant Internet connection is required to use the NTP feature.

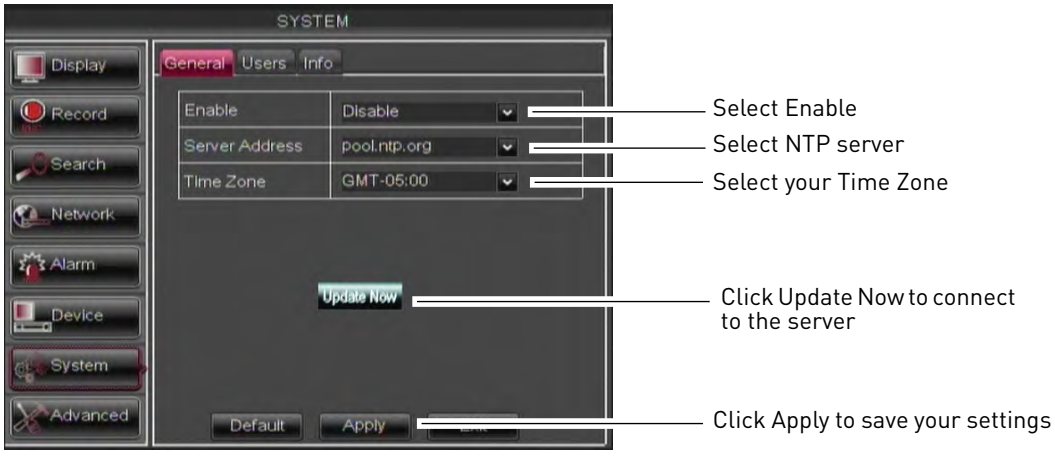
To enable NTP:

1 Right-click to open the Menu Bar and click the Main Menu button ( ).

2 Click **System**. Beside NTP, click **Setup**.

3 Configure the following:

- **Enable**: Select **Enable**.
- **Server Address**: Select the NTP server address.
- **Time Zone**: Select your region's time zone.



4 Click **Update Now** to connect to the time server.

5 Click **Apply** to save your settings.

Recording

By default, the system is set to immediately record video from connected cameras in Continuous Recording Mode.

- C **Recording—Continuous**: Normal, continuous recording

You can set the system to stop recording once the hard drive is full, or to continually record by overwriting previously recorded data. For more details, see "Configuring Hard Drive settings" on page 47.

Event Recording

The system also includes motion and alarm recording:

- M **Recording—Motion**: The system records when motion is detected by the camera
- A **Recording—Alarm**: The system records when an external senor device (not included) is triggered

Recording Audio

The system can also record audio. You must have audio-capable cameras (not included) or self-powered microphones (not included) in order to record audio on the system.

For details, see "Appendix D: Recording Audio" on page 154.

Playback and Backup

You can view and back up recorded video on the system through the Search Menu.

Playing Back Recorded Video

To playback a specific date and time:

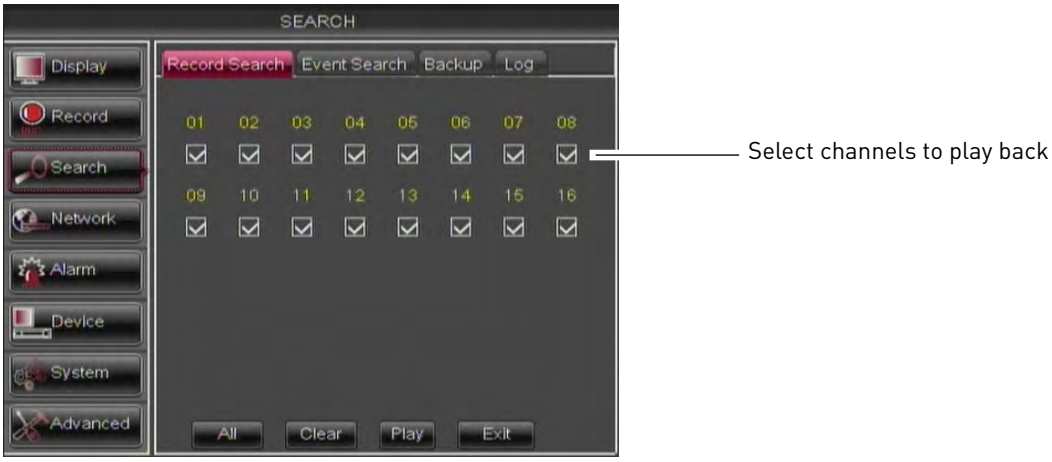
1 Right-click to open the Menu Bar and click the Record Search button ( ). The Record Search tab opens.

2 Configure the following:

- **CH**: Select the channel you wish to search. Select **All** to search all channels.
- **Search Date**: Enter the month, date, and year you wish to search for video.
- **Playback Time**: Enter the desired time you wish to search for video.

3 Click **Play** to select the exact time specified in Playback Time.

4 Select the channel or channels you want to play back and click **Play**.



To search for recorded footage on the DVR:

1 Right-click to open the Menu Bar and click the Record Search button ( ). The Record Search tab opens.

2 Configure the following:

- **CH**: Select the channel you wish to search. Select **All** to search all channels.
- **Search Date**: Enter the month, date, and year you wish to search for video.

3 Click the **Search** button. Your search results appear in the calendar. In the top portion of the calendar, results are shown for each day in the month. In the bottom portion, results are shown for each hour in the selected day.

Days in the selected month

Hours in the selected day

Search results:
Green: Continuous recording
Red: Motion or alarm recording
Grey: No recording

4 Click on a date in the calendar to see the video available for that date.

5 Click on the hour of the video you want to play back.

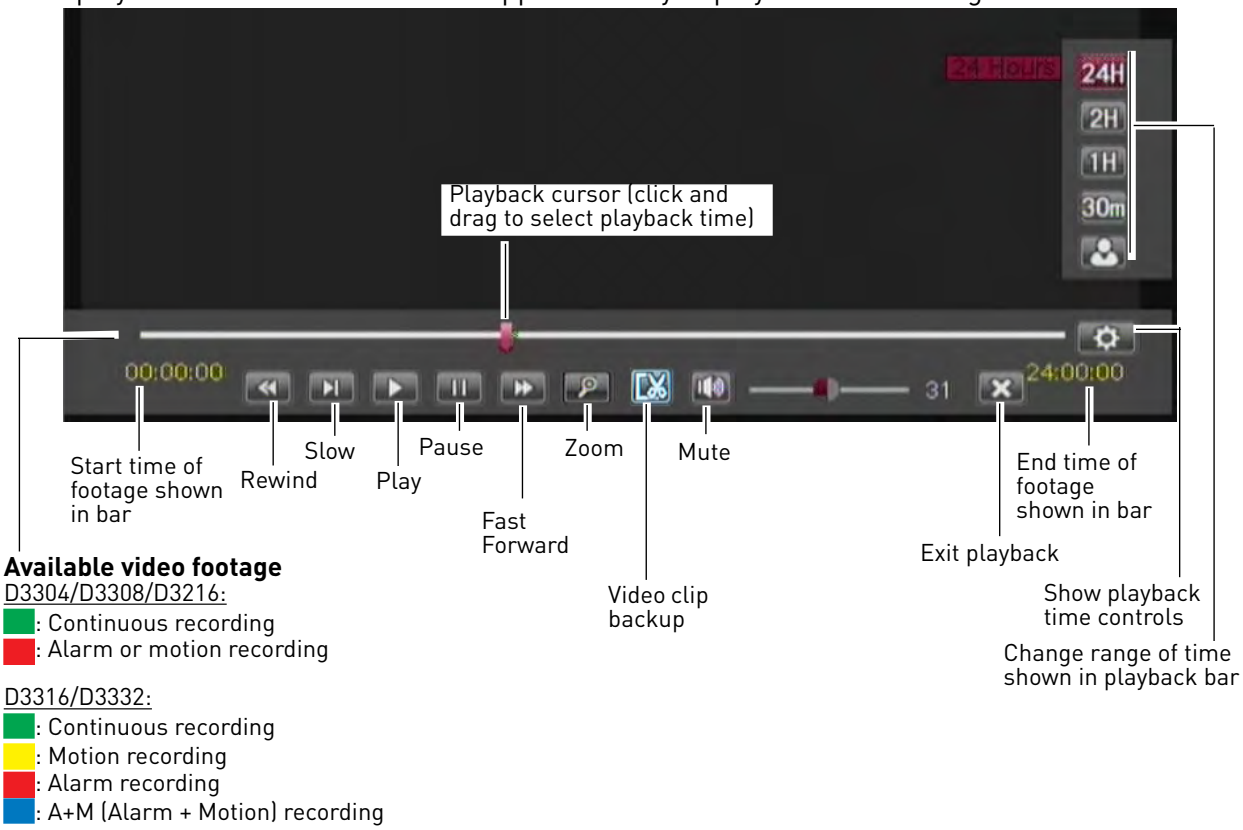
6 Select the channel or channels you want to play back.

7 Click **Play** to begin playback.

Using Playback Controls

This system features advanced playback controls that allow you to see when you have recorded footage and motion events on your cameras. They also allow you to use digital zoom in playback mode or take backups from short video clips.

Different playback controls appear depending on the number of cameras you have selected to playback. All available controls appear when you playback from a single camera.



Available video footage

D3304/D3308/D3216:

: Continuous recording

: Alarm or motion recording

D3316/D3332:

: Continuous recording

: Motion recording

: Alarm recording

: A+M (Alarm + Motion) recording

To use the advanced playback controls:

1 Move the mouse slightly to display the on-screen playback controls. You can also use the playback control buttons on the remote control.

- Click the playback controls to play, pause, fast forward, rewind, and slow down playback.
- Click **X** or right-click to quit playback and return to the Search Menu.

Finding Events in the Playback Bar

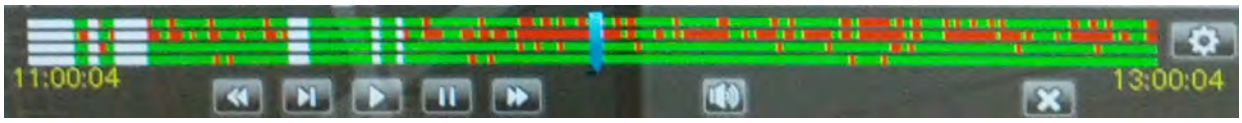
The advanced playback controls show the time and type of video footage available. The playback bars are color coded to show different recording types:

- **4 / 8 / 16-Channel:** Continuous recordings are shown in green and motion or alarm recordings are in red.
- **32-Channel:** Continuous recordings are shown in green, motion recordings in yellow, alarm recordings in red, and A+M (alarm + motion) recordings in blue.
- **All models:** White spaces indicate that no recordings are available.

NOTE: Motion detection and/or alarms must be enabled for each channel before they will be highlighted, see "Alarm" on page 46 for details.

When up to four channels are selected for playback, multiple channels are shown.

4 / 8 / 16-Channel:



32-Channel:

Video footage from up to 4 channels is shown in multiple bars

If more than four channels are selected, one bar is shown that combines all the selected channels. This means that video available on any selected channel will be shown in the bar.

Controlling the Time Range of the Playback Bar

The time range is the start and end times of the footage displayed in the Playback bar. By default, the Playback bar displays recordings recorded on the day selected for playback (from 00:00~24:00). You can change the time range to narrow in on a specific time.

To control the time range of the Playback bar:

1 During Playback mode, click to open the time range controls.

2 Click **30m**, **1H**, **2H**, or **24H** to select a time range. For example, if 30m is selected, the playback bar will show 15 minutes before to 15 minutes after the currently playing time.

OR

- To create a custom time range, click . The button will become colored. Move your mouse to the time you where you would like the range to start and click. Then, move your mouse to the time you where you would like the range to end and click. The start and end times will be replaced by the 1st and 2nd times that you clicked on.

Using Zoom in Playback Mode

You can use Zoom in Playback Mode. This is useful if you need a closer look at recorded

video.

NOTE: Zoom is only available when a single channel is selected for Playback.

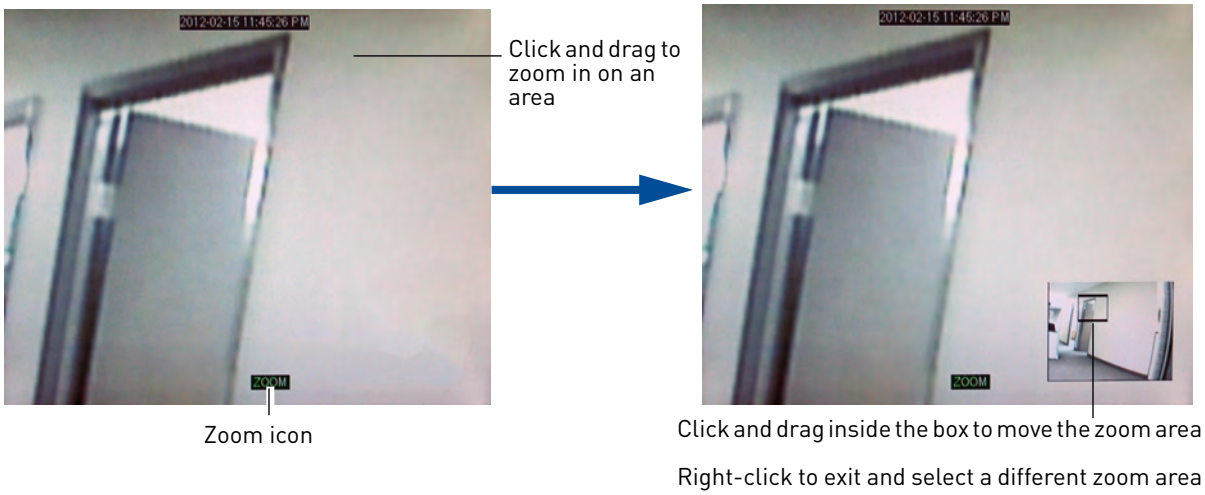
To use zoom in playback mode:

1 Open Playback mode with only one channel selected. For details, see "Playing Back Recorded Video" on page 23.

2 Click to open Zoom.

NOTE: Playback controls are not available when Zoom is activated. If you want to pause the video before you zoom, you will have to pause it before entering Zoom.

3 Click and drag on the area of the screen you would like to enlarge. The image zooms in on the selected area.


2012-02-15 11:45:26 PM
ZOOM
Click and drag to zoom in on an area
2012-02-15 11:45:26 PM
ZOOM
Zoom icon
Click and drag inside the box to move the zoom area
Right-click to exit and select a different zoom area

- The box in the lower right-hand corner shows the entire camera picture with a black box around the zoomed-in area.
- Click inside the box and drag to move the zoom area.

4 Right-click to exit and select a different zoom area. Right-click again to exit Zoom Mode and return to Playback Mode.

Using Video Clip Backup

Video clip backup allows you to select a duration of video during playback mode and save it to a USB flash drive (not included) or eSATA external hard drive (not included).

NOTE: You must format an eSATA hard drive before you can use it to backup data. For information on formatting backup drives, see "Device" on page 47.

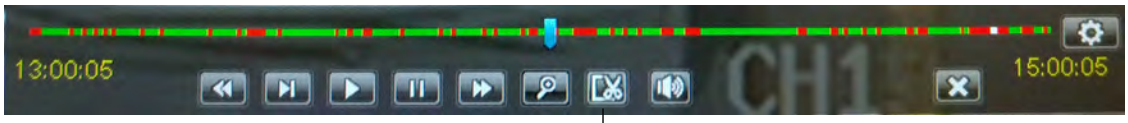
NOTE: Video clip backup is only available when a single channel is selected for Playback.

To create a backup video clip:

1 Connect a USB flash drive (not included) or eSATA external hard drive to the DVR.

2 Open Playback mode with only one channel selected. For details, see "Playing Back Recorded Video" on page 23.

3 Click the clip backup button ( ) to start your backup at the current playback time.

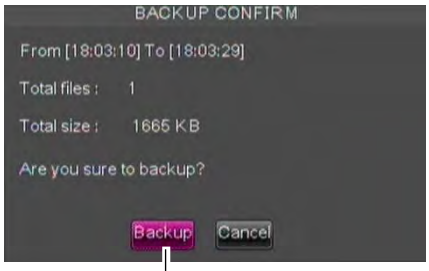


Click to select the start and stop times

4 When you want the backup clip to stop, click again.

TIP: You can use fast forward or click-and-drag the video cursor to select the stop time for the clip. This is useful because it allows you to backup longer segments of video without having to watch the whole video each time. You must have enough space on your backup drive to save the file.

5 A confirmation window appears, showing information about the backup file you are about to create. Click **Backup** to confirm. Wait for the file to be saved.



Backup

For details on viewing backed up video, see "FLIR Player: Playing Backed up Video on PC" on page 112 or see "FLIR Mac Player: Viewing Backed up Video on Mac" on page 114.

Backing Up Video

You can back up video to a USB flash drive (not included) or eSATA external hard drive (not included) connected to the rear panel of the DVR.

NOTE: For information on formatting USB or eSATA drives, see "Device" on page 47.

To back up video:

1 Connect a USB flash drive or eSATA external hard drive to the DVR.

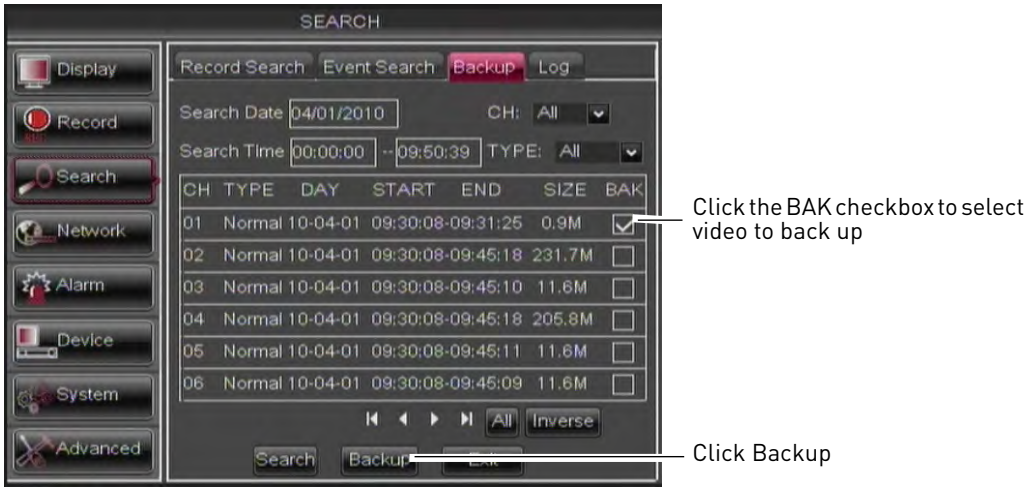
2 Right-click to open the Menu Bar and click the Record Search button ( ).

3 Click the **Event Search** tab.

4 Configure the following:

- **Search Date**: Enter the desired month, date, and year
- **Search Time**: Enter the time range you wish to search.
- **CH**: Select the channel you wish to search. To search all channels, select **All**.
- **Type**: Select the type of recording you wish to search. Choose from **All, Continuous**, or **Alarm**.

5 Click **Search**. A list of videos populate in the window.



6 Click ◀ ▶ to scroll through the list of videos. The videos are named by time.

7 Click the **BAK** checkbox beside the video you wish to back up.

8 Click **Backup**. Wait for the backup to finish before removing the USB memory drive.

Viewing Backed Up Video

To view the downloaded video, you must install the FLIR Player software.

For details on viewing backed up video, see "FLIR Player: Playing Backed up Video on PC" on page 112 or see "FLIR Mac Player: Viewing Backed up Video on Mac" on page 114.

Converting Backed Up Video to AVI Files

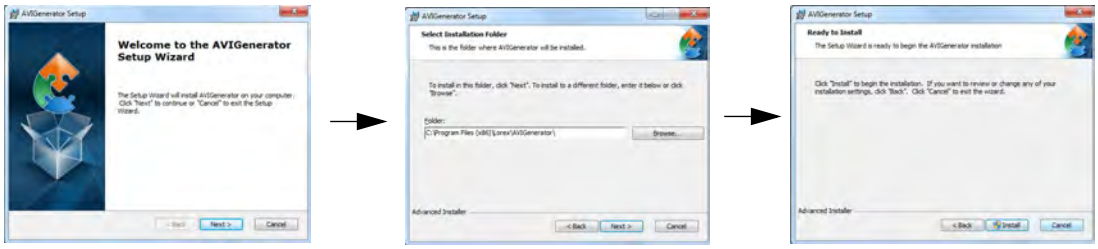
The DVR saves its backup files as proprietary video files. To share these files, you must convert them into .AVI files. Note that the AVI generator can also convert audio from audio-enabled cameras.

To install the AVI converter:

1 Insert the software disc in your computer's CD/DVD rom drive.

2 Locate the **AVI Generator** software from the CD installation wizard.

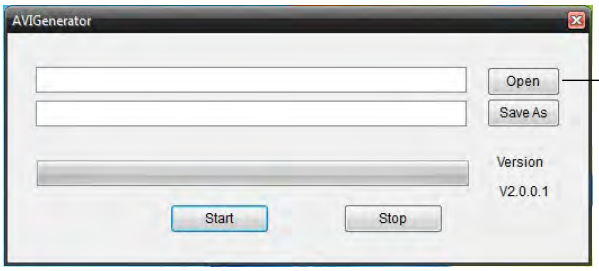
3 Follow the on-screen instructions to install AVI Generator.



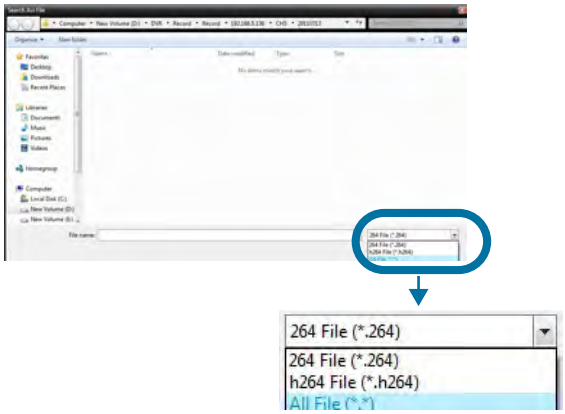
To start the AVI Generator:

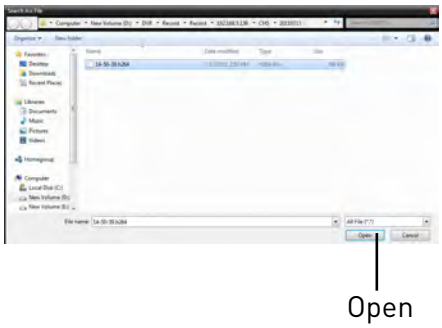
1 Double-click the **AVI Generator** shortcut on the desktop ( ).

2 Click **Open** and then locate the backed up video file on your hard drive.



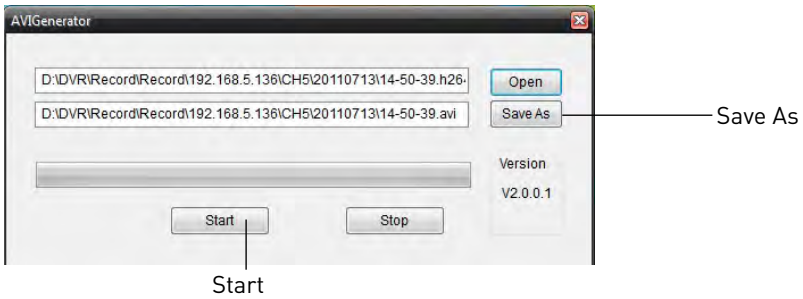
3 Select the desired file format (.264 , h.264, All File) that you wish to search for. Click **Open**.





4 Click **Start** to convert and save the file in the default save folder.

• Or click **Save As** to select a desired save folder, then click **Start** to convert the file.



5 Locate the file in the folder you selected in step 4.

Managing Passwords

ATTENTION: By default, the system user name is **admin** and the password is **000000**. Passwords are required to access the Menu Bar or Main Menu or to log into the system remotely.

The system supports the following account types:

- **ADMIN**—system administrator: has full control of the system, and can change both administrator and user passwords and enable/disable password protection.
- **USER**—normal user: only has access to live viewing, search, playback, and other functions. You may set up multiple USER accounts with varying levels of access to the system.

For security reasons, it is essential to create a custom password for the system.

Enabling and Changing Passwords

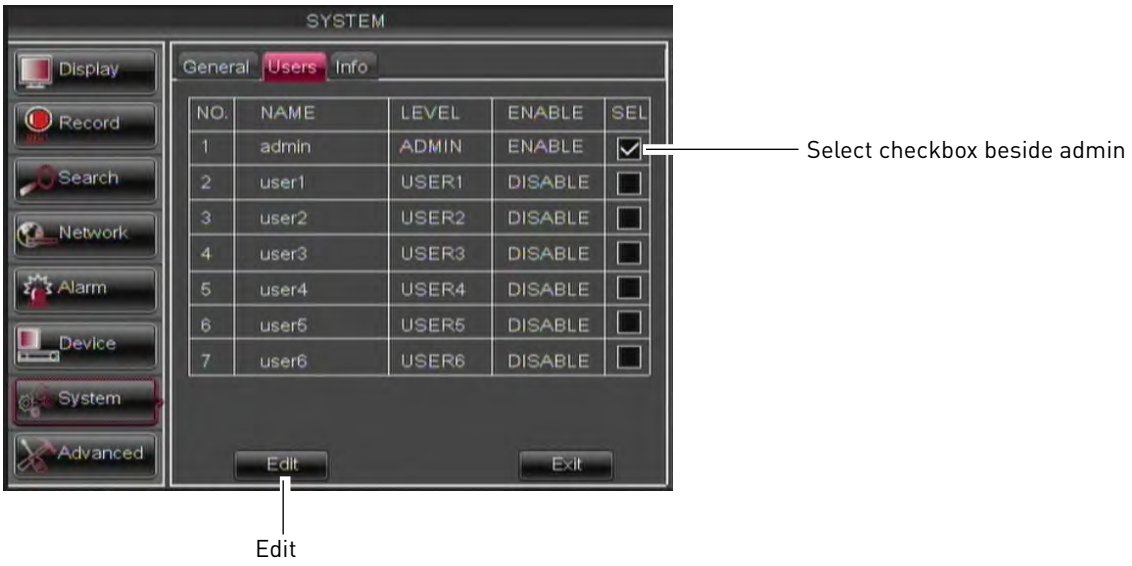
You can change the system password of user accounts from the Users menu.

To enable the admin password:

1 Right-click to open the Menu Bar and click the Main Menu button ( ).

2 Click **System** and select the **Users** tab.

3 Select the checkbox beside admin to change the admin password, then click the **Edit** button.



4 Configure the following:

- **User Name:** Enter the desired admin user name.
- **Password Enable**: Select **Enable** to enable system passwords.
- **Password**: Enter your desired password.

- **Confirm**: Re-enter the password.

5 Click **Apply** to save your settings.

Adding Users

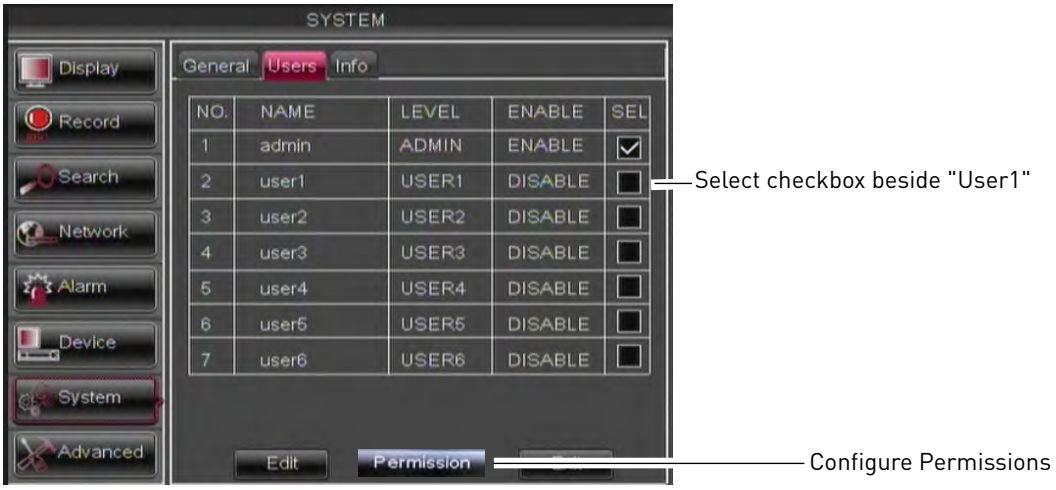
You can allow multiple users to log in to the system. When adding different users, you can assign what menus they have access to. For example, you may want your friend to monitor your system while you are away, while not giving full access to your system.

To add a new user:

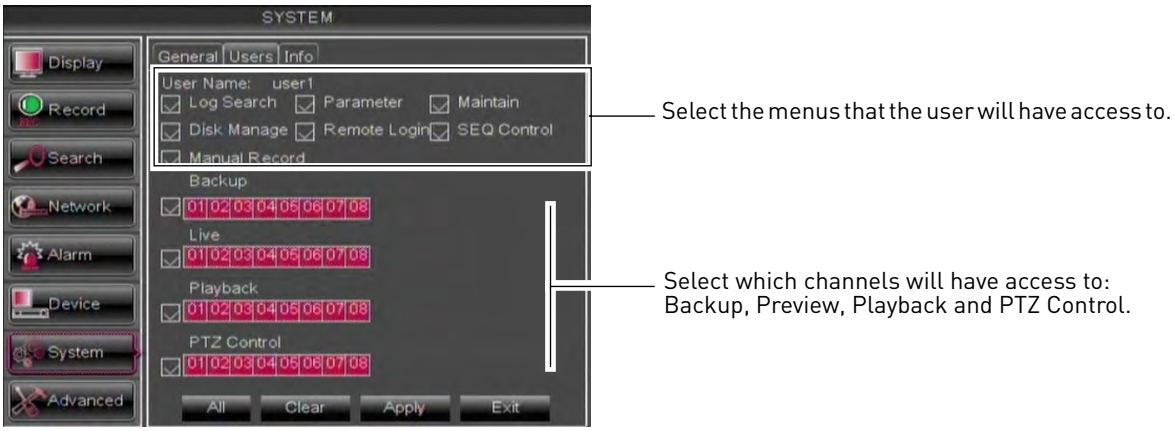
1 Right-click to open the Menu Bar and click the Main Menu button ( ).

2 Click **System**→ **Users** tab.

3 Select the checkbox beside User1 (or any other user), then click the **Permission** button.



4 Select the menus and channels the user will have access to:



5 Click **Apply** to save your settings.

6 Configure the following:

- **User Name:** Enter the desired user name.
- **User Enable:** Select **Enable** to enable the user account.
- **Password Enable**: Select **Enable** or **Disable** to enable or disable the system from prompting you for a user or admin password during log in.
- **Password**: Enter your desired password.
- **Confirm**: Re-enter the password.

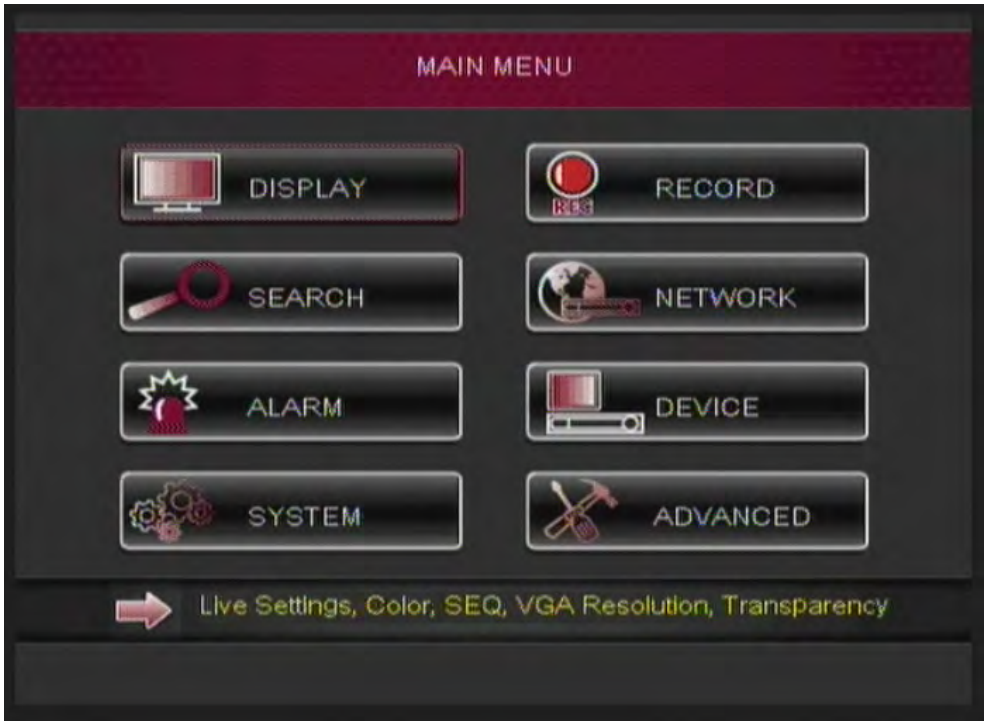
7 Click **Apply** to save your settings.

Now, you can log in to the system locally, or remotely using the user name or password you created. When logging into the system with a user account, the user will only have access to the menus you assigned.

Using the Main Menu

To open the Main Menu:

- Right-click to open the Menu Bar and click the Main Menu button ( ). Enter the system user name (default: **admin**) and password (default: **000000**) and click **Apply**.



1. **Display**: Configure display options (e.g. camera color settings, camera title, video output).
2. **Search**: Search for recorded video and log files on the system.
3. **Alarm**: Configure motion detection and alarm settings.
4. **System**: Configure system time and user accounts.
5. **Record**: Configure recording settings and recording schedules.
6. **Network**: Configure system network settings (e.g. DDNS, email alert settings).
7. **Device**: Configure PTZ settings, HDD recording mode, HDD format option.
8. **Advanced**: Configure system restart schedule, perform firmware upgrades.

Display

The display menu allows you to configure camera image settings and video output settings.

Tip: If you want to apply settings to all channels, use the "Copy To" drop-down menu, and select **All**. Click the **Copy** button to copy the setting across all channels.

Configuring Custom Channel Names

1 Select the **Live** tab.

2 In the **Channel** drop-down menu, select the channel that you wish to rename.

Channel drop-down menu

3 Click the **Name** field. Use the Virtual Keyboard to enter in the new channel name.

4 Click **Apply** to save your settings.

Changing the Position of the Channel Name

1 Select the **Live** tab.

2 In the **Channel** drop-down menu, select the channel you would like to configure.

3 In the **Position** drop-down menu, select where you would like the channel names to appear:

- **U-L**: Upper left hand corner.
- **D-L**: Lower left hand corner.
- **U-R**: Upper right hand corner.
- **D-R**: Lower right hand corner.
- **OFF**: Do not display the channel name.

4 (Optional) Use the drop-downs next to **Copy** to copy settings to another channel or all channels. Click the **Copy** button to copy settings.

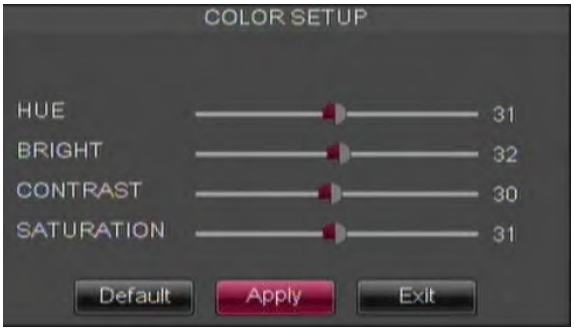
5 Click **Apply** to save your settings.

Adjusting Camera Color Settings

1 Select the **Live** tab.

2 In the **Channel** drop-down menu, select the channel that you wish to configure.

3 Click the **Setup** button next to Color. The Color Setup window opens.



4 Drag the sliders to adjust the **Hue**, **Brightness**, **Contrast**, and **Saturation**.

5 Click **Apply** to save your settings.

Enabling Covert Recording

Covert Recording blanks out the screen so that it seems as if the system is not recording. Covert channels are only visible when the admin account logs in using a remote computer or mobile device.

To enable covert recording:

1 Select the **Live** tab.

2 In the **Channel** drop-down menu, select the channel you wish to hide.

3 In the **Covert** drop-down menu, select **Enable**.

4 Click **Apply** to save your settings.

Configuring the Time and Recording Time Display

To add/remove the time stamp in the system display:

1 In the **Live Time** and **Record Time** drop-down menu, select **enable** or **disable**.

2 Click **Apply** to save your settings.

Configuring Sequence Time

Sequence time refers to the amount of time a channel appears on the screen before changing to a different channel when the DVR is in Sequence Mode. For example, when Sequence Mode is on, channel 1 is shown for several seconds before switching to channel 2.

To configure the sequence time:

1 Click the **Output** tab.

SEQ Dwell time

2 Click the **SEQ Dwell time** field and enter the time channels remains on-screen before changing to another channel.

3 Click **Apply** to save your settings.

Changing the Video-out Resolution

1 Click the **Output** tab.

2 Click the drop-down menu beside **VGA Resolution** and select the output resolution.

3 Click **Apply** to save your settings.

4 Right-click repeatedly to exit all menus. The DVR prompts you to restart. Click **OK**.

5 The DVR restarts and asks you to confirm the new resolution. Click **Yes** to confirm or **No** to revert to the old resolution. If you do nothing, the DVR will revert to the last selected resolution and restart.

NOTE: If you select a resolution that is greater than what your monitor supports, you may see a blank screen when your DVR restarts. If this occurs, do not do anything and wait until the DVR restarts. If the screen remains blank, press and hold the **Stop** button on the remote control until the DVR restarts. Your system resolution will default to 1024 x 768.

Restoring the System's Resolution if you see a Blank Screen

If you see a blank screen on your monitor after turning on your system, the DVR's output resolution may be higher than what your monitor supports. Follow the steps below to restore the DVR's default resolution to 1024 x 768.

To restore the DVR's default resolution:

1 Ensure the power and video cables are properly connected.

2 Press and hold the **Stop** button on the remote control until the DVR restarts. The DVR will restart with the default resolution of 1024 x 768.

3 When the DVR restarts, click **Yes** to confirm the default resolution.

NOTE: If your system resolution is already in 1024 x 768, pressing and holding the Stop button will not restart the system.

Adjusting Menu Transparency

You can increase or decrease the transparency of the on-screen menus.

To adjust the transparency of on-screen menus:

1 Click the **Output** tab.

2 Drag the **Transparency** slider to adjust transparency.

3 Click **Apply** to save your settings.

Adjusting the Video Margin

If you connect your DVR to a BNC monitor, you can adjust the video margins.

NOTE: You must select the BNC output mode to adjust the margins. Press **0** three times on the remote control to switch the output mode between BNC mode and VGA/HDMI mode. When BNC mode is selected, the mouse cursor appears on the BNC monitor.

To adjust the video margin:

1 Click the **Output** tab.

2 Click the **Margin** button.

3 Drag the sliders to the left or right to adjust the Left, Right, Top, or Bottom Margin.

4 Click **Apply** to save your settings and click **OK** to confirm.

Adding Privacy Zones

A privacy zone allows you to block out up to 4 portions of each channel with a black square.

ATTENTION: Areas covered by privacy zones are not visible in recordings.

To configure a privacy zone:

1 Click the **Privacy Zone** tab.

2 In the **Channel** drop-down menu, select the channel you wish to configure.

3 Configure the following:

- **Channel**: Select the channel you wish to configure.
- **Privacy Zone**: Select **ON** to enable privacy zones or **OFF** to disable privacy zones.
- **Area Setup**: Select the **Area1~4** checkboxes to enable up to 4 privacy zones.

4 Click the **Setup** button next to Mask Area. The Privacy Area setup screen opens.

Click and drag to move privacy zones

Click Inside the edge and drag to resize

- Click on a privacy area and drag to change its location.

- Click on the edge of a privacy area and drag to resize a privacy area.
- Right-click when you are finished to exit.

5 (Optional) Use the drop-downs next to **Copy** to copy privacy areas to another channel or all channels. Click the **Copy** button to copy privacy areas.

6 Click **Apply** to save your settings.

Creating a Custom Split-screen Display

You can create a custom split-screen display and re-arrange where channels are placed.

TIP: You can use the steps below to create a custom split-screen display on a secondary monitor connected to the **Video Out (Main on D3316/D3332)** port. First, move the mouse and system interface to the Video Out monitor by pressing **0** three times on the remote control. Complete the steps, and then press **0** three times on the remote control again to return the mouse and system interface to the VGA or HDMI monitor. Your custom display will be saved on the secondary monitor.

To re-arrange the split-screen display:

1 Select the **Output** tab.

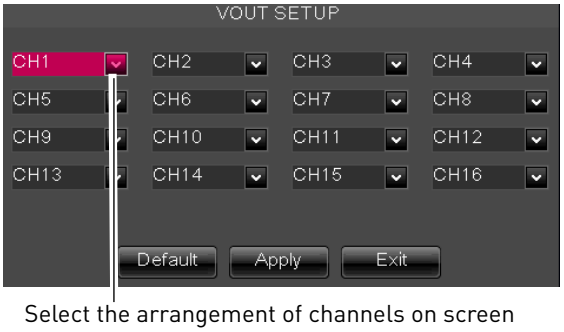
2 Under **View Setup**, select **Enable**. This lets you select and arrange the channels you want to show on the screen.

NOTE: Enabling View Setup disables your ability to change channels the normal way on the selected monitor. You will need to disable View Setup to return to normal operation.

3 Under **View Mode**, select the desired viewing mode: **Single**, **Quad**, **Nine**, or **Sixteen**.

4 Click **Vout Setup**. A menu appears that allows you to select the arrangement of channels.

5 Click the drop-down menus to select which channels to show on the screen and the arrangement of channels.



6 Click **Apply** to save changes. Click **Ok**. Right-click repeatedly to exit all menus and return to live viewing.

Record

The Record menu allows you to configure recording settings, such as the recording resolution, recording schedule, and audio recording.

Configuring Pre-recording Settings

1 Select the **Rec Para** tab.

2 In the **Channel** drop-down menu, select the desired channel you wish to configure.

3 In the **PreRecord** drop-down menu, select **Enable** to enable pre-recording or **Disable** to disable pre-recording.

4 Click **Apply** to save your settings.

Configuring Backup File Duration (Pack Duration)

"Pack Duration" refers to the duration of a backed up file in the system. By default, a recording is "packaged" into 15 minute video files.

NOTE: This feature is not supported on D3316/D3332. D3316/D3332 packages video files into files of a maximum size of 255MB.

To change the DVR's backed up file size:

1 Select the **Rec Para** tab.

2 In the **Pack Duration** drop-down menu, select the desired duration (15~60 minutes).

3 Click **Apply** to save your settings.

File Size duration

Changing the file size changes the duration of backed up files. For example, if you select 15 minutes as your file size, the system stores video files in 15 minute durations.

Configuring the Recording Schedule (Continuous, Motion, Alarm)

To configure the recording schedule:

1 Click the **Schedule** tab.

2 Configure the following:

- **Channel**: Select the channel you wish to configure the schedule for.
- **Week**: Select the day of the week you wish to configure.

3 Click inside the grid to configure the recording schedule:

- The recording schedule is arranged as a grid. Each row represents a recording type (Continuous, Motion, and Alarm), and each box represents an hour.
- Recording for each recording type is enabled during the selected hour when the box is filled in with the corresponding color. Recording for each recording type is

disabled for the selected hour when the box is gray.

4 (Optional): Use the top **Copy** and **Copy To** drop-down to copy the recording schedule to a specific day or all days. Click **Copy** to copy the schedule.

5 (Optional): Use the bottom **Copy** and **Copy To** drop-down to copy the recording schedule to a specific channel or all channels. Click **Copy** to copy the schedule.

6 Click **Apply** to save your settings.

Enabling Audio Recording

Audio-capable cameras are required (not included) for audio recording.

To enable audio recording:

1 Click the **MainStream** tab.

2 Beside the corresponding channel, select or deselect the checkbox under **Audio** to enable or disable audio recording.

3 Click **Apply** to save your settings.

Configuring Recording Quality, Resolution, and Video Frame Rate

You can configure the recording quality, recording resolution and video frame rate for each channel.

To change the recording quality, recording resolution, and video frame rate:

1 Click the **MainStream** tab.

2 Under **Mode**, select **D1** or **960H**. 960H will enable larger, wide-screen formats.

NOTE: If you change this setting, the DVR will restart when you save changes.

3 Under the **Quality** drop-down menu, select from **Good, Better**, or **Best** to adjust the quality of recordings on each channel.

4 Under the **Resolution** drop-down menu, select the Recording Resolution for each channel:
   - If D1 is selected, available options are **CIF** (320x240), **HD1** (720x240), or **D1** (720x480).
   - If 960H mode is selected, available options are **480x240**, **960x240**, or **960x480**.

5 Under the **FPS** drop-down menu, select the number of frames per second you want the DVR to record on each channel.

6 (Optional) Use the **Copy** and **Copy To** drop-down menus to copy recording settings to one or all channels. Click **Copy** to copy recording settings.

7 Click **Apply** to save your settings.

Search

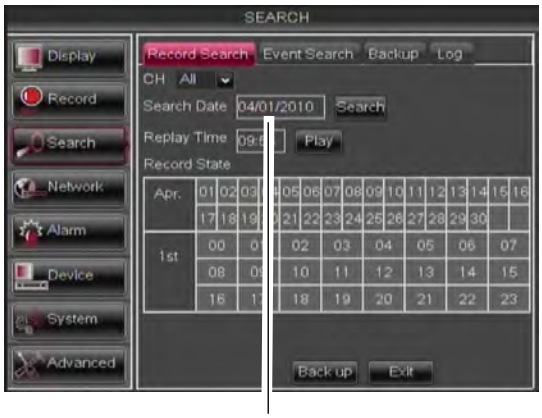
The Search menu allows you to search for saved video on your system for playback and backup.

Searching for Video on the System

1 In the main menu, click **Search**, or click the Search Menu button ( ) in the menu bar.

2 In the **CH** drop-down menu, select the channel you wish to search or select **All** to search all channels.

3 Click the **Search Date** field, to enter the desired month, date, and year you wish to begin searching for video.



Search Date

4 Click **Search**.

5 Click on a date in the calendar to see the video available for that date.

Click a date to see video available

Click a time to play video from that time and date

6 Click on the hour of the video you want to play back.

7 Select the channel or channels you want to play back.

8 Click **Play** to begin playback.

Video Playback Controls

Move the mouse slightly to display the on-screen playback controls. You can also use the playback control buttons on the remote control or front panel of

the system.

Use the video control buttons to manipulate video playback

- Click **X** to quit playback and return to the Search menu.

Backing up Video Files

You can back up video files on your USB flash drive (not included) or external eSATA hard drive (not included).

You must format an eSATA hard drive before you may use it with the system. For details, see "Formatting eSATA Backup Drives" on page 48.

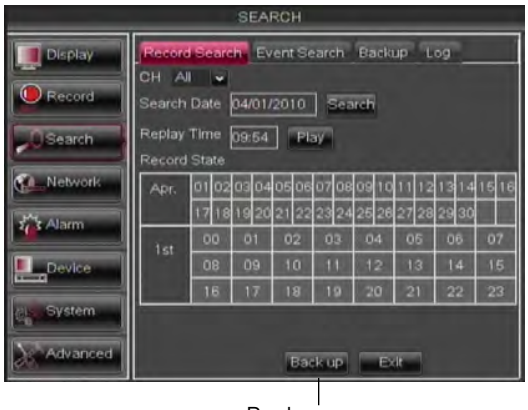
To back up video files:

1 Perform a search.

2 Insert a blank USB flash drive in the rear panel of the system.

3 Click on the desired date you wish to back up.

4 Click the **Backup** button. A list of files appears in the Log menu.



Backup

5 Click the checkbox under **BAK** next to the file you want to backup.

6 Click the **Backup** button to begin copying the video files to your flash drive.

NOTE: You will need the FLIR Player (included on the CD) to view the saved files.

Using the Event Search

Event Search allows you to find videos that are marked as a specific recording type (e.g., motion recording). This allows you to quickly and easily sort through videos that only have certain attributes.

NOTE: Videos are not marked as Alarm unless continuous recording is turned off and motion or alarm settings are enabled.

To perform an Event Search:

1 Click the **Event Search** tab**.**

2 Configure the following:

- **Search Date**: Enter the Month, Date, and Year.
- **CH**: Select the channels you wish to search.
- **Search Time**: Enter the time range you wish to search.
- **Type**: Select the recording type you wish to search for. Choose from **Normal** (continuous recording), **Motion**, **Alarm**, or **A+M** (alarm + motion; 32-Channel only).

3 Click **Search**. A list populates with videos.

4 Perform one of the following:

- **Play video**: Double-click on the desired file.
- **Back up a file**: Connect a blank USB flash drive to your system. Select the **BAK** checkbox beside the desired file name. Then, click the **Backup** button.

Using the Log Search

A log search allows you to search system event logs.

To perform a Log search:

1 Click the **Log** tab.

2 Configure the following to perform a Log search:

- **Log Type**: Select the log type you wish to search under. Choose from **Alarm** (i.e. motion events), **Operation** (i.e. Configuration changes, Setup), or **All**.
- **Start Time**: Enter the time you wish to begin searching.
- **End Time**: Enter the time you wish to end searching.

3 Click **Search**.

4 (Optional) Click the **Backup** button to backup system logs to a USB flash drive (not included).

Network

The Network menu allows you to configure the system's DDNS and network settings.

Configuring Network Type: DHCP & Static IP

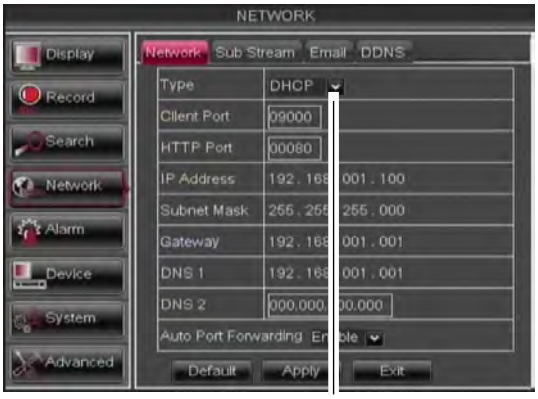
The system has the ability to operate in DHCP mode and Static IP mode.

After setting up your system, it is highly recommended to set your system to use a static IP address. This ensures that the IP address will not change if the power goes out or your router resets.

To configure DHCP and Static IP settings:

1 Select the **Network** tab.

2 In the **Type** drop-down menu, select **DHCP** or **Static**. If you select DHCP, the router automatically assigns an IP to your DVR.



Select DHCP or Static

If you select Static, click the field beside IP

Address, and enter in the IP address of your choice.

- Enter your custom **Subnet Mask**, **Gateway**, **DNS1** and **DNS2** using the mouse.
- You must assign the IP in your router that you wish to make static. For example, if you assign 192.168.2.89 as the static IP in the DVR, you must assign 192.168.2.89 in your router as a static IP as well. Consult your router's user's manual for details.

3 Click **Apply** to save your settings.

4 Right-click until you exit all menus. You will be prompted to restart.

Enabling Auto Port Forwarding

Auto Port Forwarding allows the DVR to open required ports on your router. This feature only works on certain router models. If the Auto Port Forwarding feature does not work on your router, it is recommended to use the Auto Port Forwarding Wizard (PC only), located on the software CD. You may have to manually open the port on your router.

To Enable Auto Port Forwarding:

1 Select the **Network** tab.

2 In the **Auto Port Forwarding** drop-down menu, select **Enable** or **Disable**.

3 Click **Apply** to save your settings.

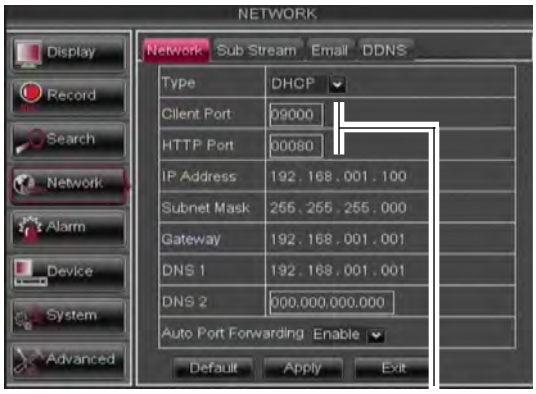
Changing the DVR's Client and HTTP Port

The DVR's Default Client port is **9000**. The default HTTP port is **80**. You must port forward the Client Port and HTTP port on your router to your DVR's IP address to enable remote access.

To change the Client port and HTTP port:

1 Select the **Network** tab.

2 In **Client Port**, enter the desired Client Port (default: **9000**).



Client Port & HTTP Port fields

NOTE: 9000 is represented as "09000."

3 In **HTTP Port**, enter the desired HTTP Port (default: **80**).

4 Click **Apply** to save your settings.

5 Right-click to exit all menus. You will be prompted to restart.

Adjusting Remote Connectivity Streaming Rates

You can adjust the data streaming rate (also called the SubStream) when you connect to the system remotely. If you want to conserve bandwidth, select a lower frame rate and bitrate.

NOTE: Setting your system to stream with a lower frame and bitrate may cause the video to appear choppy or slow.

To adjust the SubStream settings:

1 Click the **SubStream** tab.

2 Configure the following beside the desired channel:

- **Video:** Select **Enabled** or **Disabled**. If you select Disabled, you will not be able to view the channel when connecting remotely to the system.
- **FPS:** Select the desired frames per second.
- **Bitrate**: Select the desired video bitrate.
- **Audio**: Select or deselect the checkbox to enable or disable the system from streaming audio when viewing the system remotely.

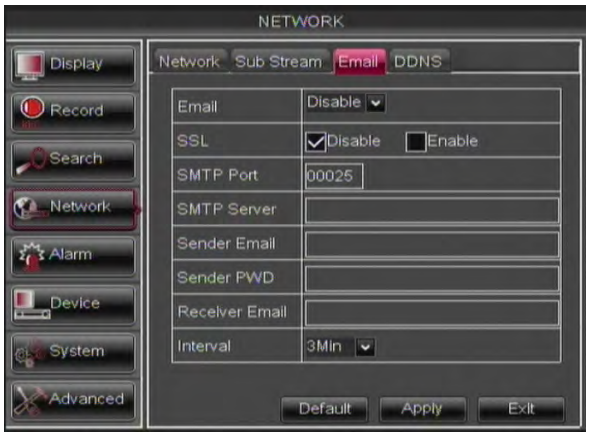
3 Click **Apply** to save your settings.

Setting up Email Notification

The system can send email notifications when it detects motion or when an alarm parameter triggers.

To set up email notification:

1 Click the **Email** tab in the Network menu.



2 From the **Email** drop-down menu, select **Enable**.

3 Configure the following:

- **SSL**: Select **Enable** or **Disable** to configure Secure Socket Layer protocol.
- **SMTP Port**: Enter your SMTP address.
- **SMTP Server**: Enter your SMTP Server.
- **Sender Email**: Enter the sender email address. This can be any address of your choice.
- **Sender Password**: Enter your email server's password.
- **Receiver Email:** Enter the recipient's email address.
- **Interval:** Enter the interval the DVR waits before sending a new email notification.

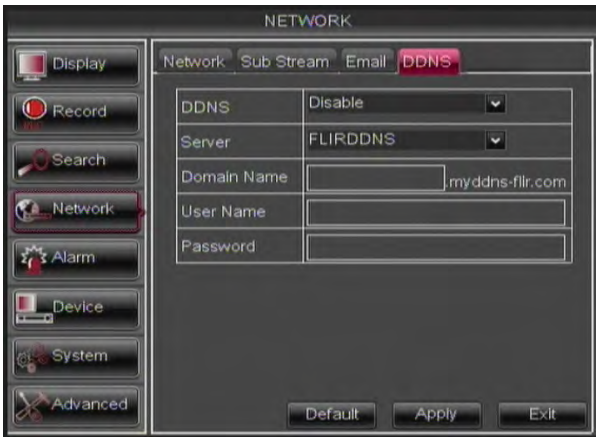
4 Click **Apply** to save your settings.

Configuring DDNS settings

You must create a DDNS account and enter your DDNS settings into the DVR before you can remotely connect to your system. For details on creating a DDNS account, see "Setting up your DVR for Remote Connectivity" on page 53.

To configure DDNS settings:

1 Click the **DDNS** tab.



2 Configure the following:

- **DDNS**: Select **Enable**.
- **Server**: Select **FLIRDDNS** (default).
- **Domain Name**: Enter the **Domain name/ URL Request** you received in the email after registering for DDNS.
- **User Name**: Enter your **DDNS User Name**.
- **Password**: Enter your **DDNS Device password**.

3 Click **Apply** to save your settings.

NOTE: Please allow 10~15 minutes for the DDNS servers to update with your new DDNS address before attempting to connect.

Alarm

The Alarm tab allows you to configure Motion Detection and Alarm settings.

Configuring Motion Detection

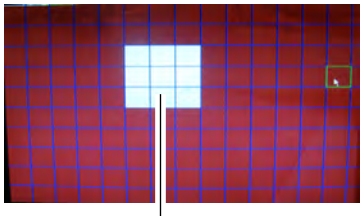
Configure motion settings to determine the area you wish to monitor for motion events, and the outcome if a motion event occurs.

To configure motion settings:

1 Select the **Motion** tab.

2 Configure the following:

- **Channel:** Select the channel you wish to configure.
- **Enable:** Select **Enable** or **Disable** to activate or deactivate motion recording.
- **Area:** Click the **Setup** button to configure the area of the screen that detects motion.



Click and drag the mouse cursor to configure motion detection areas. Motion detection is enabled in red areas and disabled in transparent areas. Right-click to exit.

- **Sensitivity:** Select motion sensitivity. The greater the number, the greater the sensitivity.
- **Alarm Out:** Select the checkbox to enable the system to trigger a device connected to the alarm block.
- **Latch Time:** Enter the duration the alarm continues to trigger after the event ends.
- **Show Message:** Select the checkbox if you want the system to display a system message when an alarm triggers.
- **Buzzer:** Select the duration the system will "beep" when motion is detected. Or select **OFF** to disable the "beep" during motion events.
- **Send Email:** Select the checkbox if you want the system to send email notifications if an alarm triggers. Email notifications must be configured.
- **Record Channel**: Select the channel you wish the DVR to record during motion recording.
- **Full Screen:** Select the **Full Screen** check box so that the system goes into full screen mode when motion or an alarm trigger is detected.
- **Post Recording**: Enter the post recording duration (the time the system continues to record after a motion event occurs).

3 Click **Apply** to save your settings.

Configuring Alarm Settings

The Alarm settings menu allows you to configure how the system behaves when an external alarm device (not included) is triggered.

To configure the Alarm tab:

1 From the Alarm menu, click the **Alarm** tab.

2 Configure the following:

- **Alarm In:** Select the channel you wish to configure.
- **Alarm Type:** Select the alarm type of the device. Choose from N/O (normally open), N/C (normally closed).
- **Alarm Out:** Select the checkbox to enable the system's alarm block to trigger a connected external alarm.
- **Latch Time:** Enter the duration the alarm continues to trigger after the event ends.
- **Show Message:** Select the checkbox if you want the system to display a system message when an alarm triggers.
- **Buzzer:** Select the checkbox to enable the system to "beep" if an alarm triggers.
- **Send Email:** Select the checkbox if you want the system to send email notifications if an alarm triggers.
- **Post Recording:** Select the duration the system continues to record as an event after the alarm trigger ends. For example, if you select 30s (30 seconds), the system continues to record for 30 seconds after the alarm trigger ends.
- **Full Screen:** Select the Full Screen check box so that the system goes into full screen mode when motion or an alarm trigger is detected.

3 Click **Apply** to save your settings.

Device

The Device menu allows you to configure hard drive and PTZ settings and format hard drives or a USB flash drive (not included).

- For details on connecting PTZ cameras (not included), see "Appendix B: Connecting a PTZ Camera" on page 147.

Configuring Hard Drive settings

To format the hard drive:

> **ATTENTION**: Formatting the HDD erases **all data** on the hard disk. **This step cannot be undone.**

1 Select the **HDD** tab.

2 Click the checkbox under **Select** to choose the drive you wish to reformat.

3 Click **Format HDD**.

4 When the warning window appears, click **OK**. Wait for the system to format the hard drive.

To set the hard drive recording mode (loop recording or linear recording):

1 Select the **HDD** tab.

2 Select the checkbox beside the hard drive you wish to configure.

3 In the **Overwrite** drop-down menu, select **Auto** (recommended), or select the desired duration the hard drive should retain its data.

NOTE: If overwrite recording is enabled, the system's hard drive automatically re-writes the hard drive's oldest content (first in first out).

4 Click **Apply** to save your settings.

Formatting USB Flash Drives

ATTENTION: Formatting a USB flash drive erases **all data** on the drive.
This step cannot be undone.

1 Insert a USB flash drive (not included) into one of the USB ports.

2 In the main menu, click **Device→HDD**.

3 Click **Format USB**, then click **OK**. Wait for formatting to complete.

Formatting eSATA Backup Drives

You may use a single eSATA external hard drive for backup purposes. This allows for the quick backup of large amounts of data. You must format an eSATA hard drive before you may use it with the system.

NOTE: The eSATA hard drive must be self-powered to work with the system.

NOTE: You may use any size eSATA hard drive with the system. However, the system will only use the first 350GB for backup purposes (D3304/D3308/D3216) or the first 900GB (D3316/D3332).

To format an eSATA hard drive:

ATTENTION: Formatting an eSATA hard drive erases **all data** on the drive.
This step cannot be undone.

1 Connect an eSATA external hard drive to the system.

NOTE: If you have previously used the hard drive for another purpose, the hard drive must be formatted as FAT32 before it will be recognized by the DVR.

2 Right-click and select to open the Main Menu.

3 Click **Device→HDD**.

4 Click **Format esata**. Click **OK** to confirm.

NOTE: If the DVR cannot recognize the hard drive, restart the DVR. If it still does not recognize the hard drive, format the hard drive using a PC to FAT32.

5 When performing backups, the DVR will now copy data to the eSATA drive. You can view the data on the eSATA hard drive by connecting it to a PC or Mac.

System

The System tab allows you to configure the system time and user accounts.

- For instructions on how to set the system time, including how to setup automatic Daylight Savings Time adjustments or NTP, see "Setting the Date and Time" on page 19.

Changing Date Format

You can change the way the system displays the time (i.e. Month, Day, Year)

To change the date format:

1 Select the **General** tab.

2 In the **Date Format** drop-down menu, select the desired format. Choose from **MM/DD/YY** (Month, Day, Year), **YY/MM/DD** (Year, Month, Date), or **DD/MM/YY** (Day, Month, Year).

3 Click **Apply** to save your settings.

Changing Time Format

You can change the way the system displays the date and time format (i.e 6:00 pm or 18:00).

To change the time format:

1 Select the **General** tab.

2 In the **Time Format** drop-down menu, select **12 Hour** or **24 Hour**.

3 Click **Apply** to save your settings.

Changing the System Language

1 In the **Language** drop-down menu, select your desired system language.

2 Click **Apply** to save your settings.

3 Right-click until you exit the menu. Follow the on-screen instructions to restart your system.

Changing Video Output - NTSC & PAL

To change the video output:

1 In the **Video Format** drop-down menu, select **NTSC** or **PAL**.

2 Click **Apply** to save your settings.

Configuring Menu Time Out and Auto Logout

The Menu Time Out setting allows you to configure how long the system menu will remain on the screen during inactivity. If passwords are enabled, it also enables the Auto Logout, which allows the system to lock itself after the system is idle for the selected duration.

To configure Auto Logout:

1 Select the **General** tab. In the **Menu Time Out** drop-down menu, select the desired time before the system locks itself.

2 Click **Apply** to save your settings.

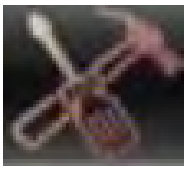
NOTE: You will need your system's user name and password to unlock the system.

Adding Users & Changing the Admin Password

- For details on changing admin and user passwords, see "Managing Passwords" on page 31.
- For details on creating User accounts, see "Adding Users" on page 32.

Viewing System Information

- Click the **Info** tab.



Advanced

The Advanced menu allows you to update system firmware, load system defaults.

Configuring the "Auto Reboot" feature

Auto Reboot allows the system to restart during a specified time and date. Restarting the system every so often ensures system stability.

To enable the Auto Reboot feature:

1 Select the **Maintain** tab.

2 Configure the following:

- **Auto Reboot:** Select **Enable** or **Disable** to activate or deactivate the Auto Reboot feature.
- **Reboot:** In the drop down menu, select how often the system restarts. Choose from **Every day**, **Every Week**, or **Every Month**. Enter the desired day and time you want the system to restart.

3 Click **Apply** to save your settings.

Upgrading the System Firmware

Firmware upgrades can provide improved functionality to your DVR. When firmware upgrades become available, you can download them for free from www.flirsecurity.com/pro/pro.

To upgrade the system firmware:

1 In your web browser, visit www.flirsecurity.com/pro/pro and search for the model number of your DVR (check the label underneath your DVR for the model number). Download the free firmware upgrade if one is available.

2 Extract the firmware into a blank USB flash drive. The firmware should be in a folder named **dvrupgrade**. Ensure that this is the only folder in the USB drive.

3 Insert the flash drive into one of the **USB** ports.

4 Right-click to open the Menu Bar and click the Main Menu button ( ).

5 Click **Advanced**.

6 Click **Firmware Update**.

7 Follow the on-screen instructions to update the firmware. **Do not remove the USB flash drive or power off the DVR during the firmware update**. Wait for the system to reboot.

Restoring to Factory Default Settings

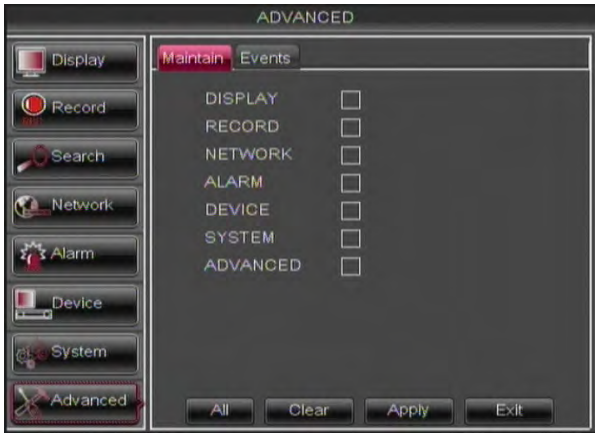
Restoring to factory default settings reverts any setting changes you have made to their original settings. This does not affect the recordings saved on the DVR. You can reset a single menu, or all menus.

To load system defaults:

1 Right-click to open the Menu Bar and click the Main Menu button ( ).

2 Click **Advanced**. Then click **Load Default**.

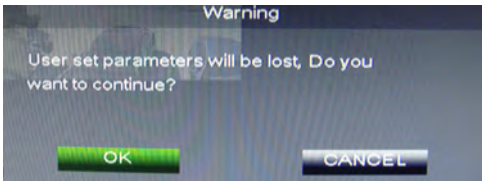
3 Select the menus that you wish to restore to default settings, or click **All** to restore the entire system to default settings.



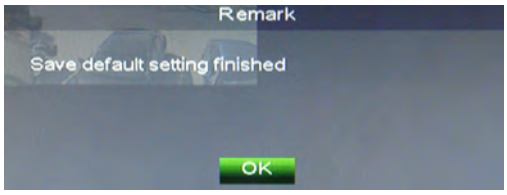
NOTE: It is recommended to leave the Network menu unchecked when restoring the system to factory defaults. If you restore the Network menu, you will need to redo remote connectivity setup to access your DVR over the Internet.

4 Click **Apply**.

5 When the warning window appears, click **OK** to restore your settings.



6 Click **OK** to return to the menu.



7 Right-click until you have exited all menus. The DVR prompts you to restart.

Restarting or Shutting Down the DVR

To restart or shut down the DVR:

1 Right-click to open the Menu Bar and click the Main Menu button ( ).

2 Click **Advanced**.

3 Click **Reboot** or **Shut Down**.

4 Follow the on-screen instructions to restart or shut down your system.

Configuring System Warnings

The system can send out email notifications, or trigger a connected alarm device if it detects system abnormalities. For example, the system can send out a warning if the hard drive is low on storage.

To configure system warnings:

1 Click the **Events** tab.

2 Configure the following:

- **Event Type**: Select the event that triggers the system to send out a notification or alarm trigger. Choose from **Disk No Space** (low hard drive space), **Disk Error** (hard drive error), or **Video Loss**.
- **Enable**: Select **Enable** or **Disable** to activate or deactivate the system from sending out notifications.
- **Alarm Out**: Select the checkbox to enable alarm out devices from triggering.
- **Show Message**: Select the checkbox for the system to display an error message when an event occurs.
- **Send Email**: Select the checkbox for the system to send out email notifications when a system error occurs. Note, email notifications must be configured.
- **Latch Time**: Select the delay duration in the drop-down menu.
- **Buzzer**: Select the buzzer (system beep) duration when the system detects a system error.

3 Click **Apply** to save your settings.

Saving Your System Configuration to a USB Flash Drive

The DVR allows you to save your current system configuration to a USB flash drive (not included). This is useful if you want to backup your current settings.

NOTE: This function only saves settings created in system menus. It does not save or backup any video.

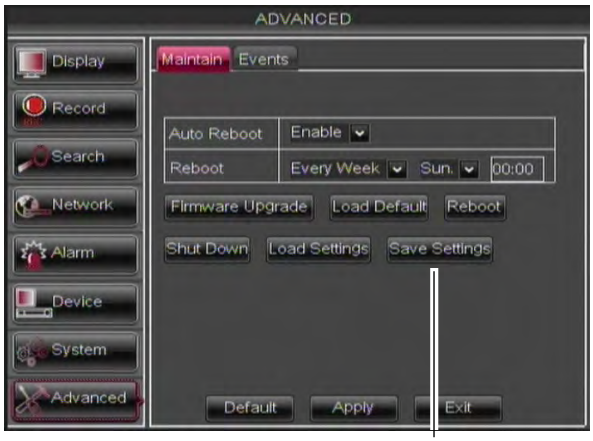
To save your system configuration to a USB flash drive (not included):

1 Insert a USB flash drive (not included) into one of the **USB** ports.

2 Right-click to open the Menu Bar and click **Main Menu (** **)**.

3 Click **Advanced** and select the **Maintain** tab.

4 Click **Save Settings**. Wait for the system to save your settings.



Click to save all system settings to a USB flash drive

Loading a System Configuration from a USB Flash Drive

1 Insert a USB flash drive (not included) that contains a saved configuration to a **USB** port. See above for details on how to save your DVR configuration.

2 Right-click to open the Menu Bar and click **Main Menu (** **)**.

3 Click **Advanced** and select the **Maintain** tab.

4 Click **Load Settings**. The DVR will load the saved settings from the USB flash drive and then restart.

Setting up your DVR for Remote Connectivity

The system features the following PC/Mac remote connectivity options for connecting over a LAN or the Internet:

- A PC Client Software to access a single system.
- Built-in browser-based software for Internet Explorer® (PC) or Safari® (Mac).
- CMS-D3, a multi-site CMS application for PC and Mac (for details, see "CMS-D3 Central Management Software" on page 83).

Remote Viewing Client

For details on navigating the remote viewing interface, see "Remote Viewing Interface" on page 60.

System Requirements

Prior to using FLIR Client 1, make sure your system meets or exceeds the following system requirements:

Description	Requirement
CPU	Pentium® 4 or above
Operating System	Windows XP/Vista/7/8 Mac OSX 10.6.6 and above (Intel processors only)**
Memory	256 MB RAM or greater
Video	16 MB of video memory
Network (LAN)	10/100 BaseT Network
Network (WAN)	384 Kbps upstream* *High-speed Internet service is recommended when using DVR Netviewer.
Browser	Internet Explorer 7 or later (PC) / Safari 6.0 and above** (Mac)

NOTE: If a user connects to the system remotely, there may be slow performance when accessing the system locally. This is normal, and not a malfunction.

** For the latest compatibility list, check www.flirsecurity.com/pro/prowww.flirsecurity.com/pro/pro, as new software versions are released to the market.

Accessing your DVR within a local network (LAN)

You can connect to your DVR over the local area network (LAN). It is recommended to confirm connectivity over a local network before setting up your DVR for Internet connectivity.

NOTE: To complete the steps below, your computer must be on the same network as your DVR.

NOTE: Except where noted, the instructions below are the same for PC and Mac.

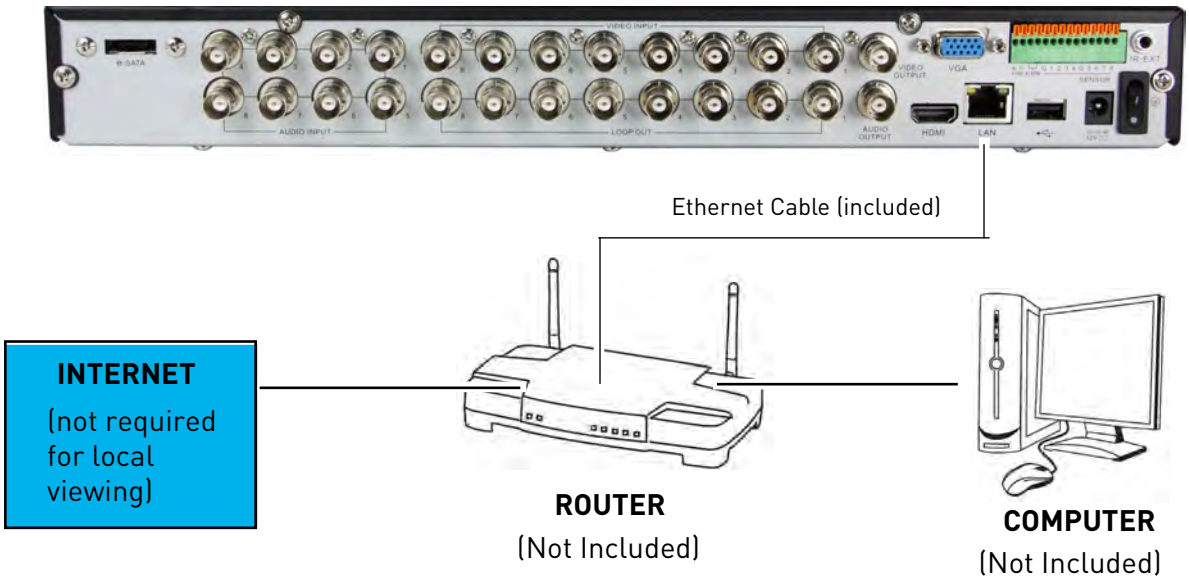
Step 1 of 3: Connect your DVR to the Local Area Network

1 Power off your DVR by turning the power switch to ●.

2 Connect an Ethernet cable (included) to the **LAN** port on the rear panel of the DVR. Connect the other end of the Ethernet cable to a router or switch on your network.

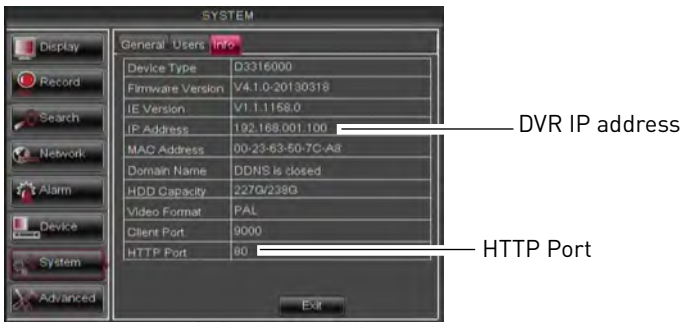
3 Turn the power switch to **I** to power the DVR back on.

8-channel model shown



Step 2 of 3: Obtain the DVR's Local IP Address

1 Press the **PTZ/** ↵ button on the front panel of the DVR to open the System Information window.



2 Write down the **IP Address** and **HTTP Port** number of the DVR.
- A local IP looks something like this: 192.168.5.118. Note that single digit numbers appear as three digits. For example, "005" is the same as "5".
- Write down the port number beside HTTP Port.

Step 3 of 3: Connect to the DVR's Local IP Address

Follow the steps below to confirm connectivity over a local network on a PC or Mac.

To connect using the DVR's local IP address on a PC:

1 Install **Client software for PC** from the CD or from www.flirsecurity.com/pro.

2 Double-click on the Client software for PC icon ( ) on your desktop.

3 Enter the following information:
- **IP Address:** Enter the IP Address of your DVR.
- **User Name:** The default user name is **admin**.
- **Password:** By default, the password is **000000**.
- **Client Port:** By default, this is **9000**.

4 Click **Login** to access your DVR. You will be prompted to change the password for your system.

5 Enter a new 6 character password and click **OK**.

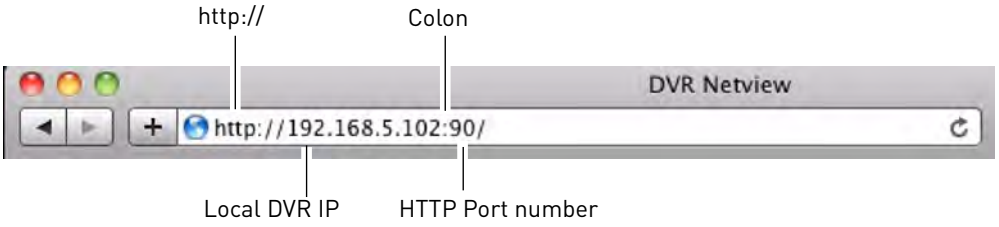
6 Enter the new password under **Password** and click **Login**. Client software for PC connects to your DVR and streams live video from your cameras.

To connect to the DVR's local IP address on a Mac:

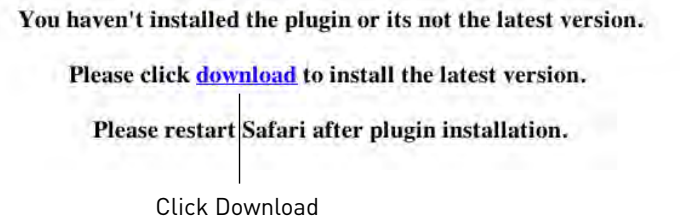
1 Open Safari.

2 Enter **http://**, the **IP address of the DVR**, **colon**, and the **HTTP port number of the DVR** (e.g. http://192.168.5.118**:**80) into the address bar. You must include the HTTP port number of the DVR after the address. A page appears to prompt you to install a plug-in.

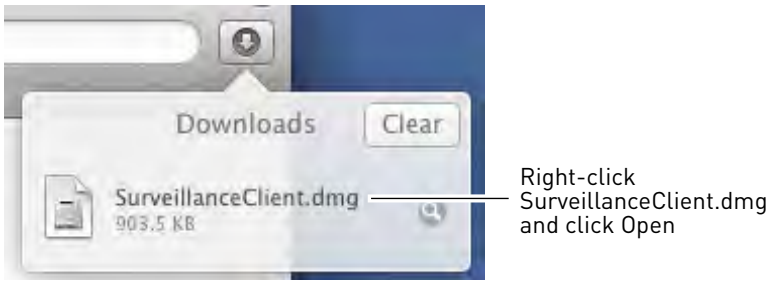
Example (Connecting to a Local IP Address using Safari):



3 Click **Download** to download the plug-in for Safari.


You haven't installed the plugin or its not the latest version.
Please click download to install the latest version.
Please restart Safari after plugin installation.
Click Download

4 Click the downloads button ( ) on the top-right corner of Safari. Right-click **SurveillanceClient.dmg** in the downloads list and select **Open**. A web plugin folder appears.



5 Double-click **SurveillanceClient** and follow the on-screen instructions to install.

6 Quit Safari (right-click the Safari icon in the dock and select **Quit**) and then restart Safari.

7 Enter **http://**, the **IP address of the DVR**, **colon**, and the **HTTP port number of the DVR** (e.g. http://192.168.5.118**:**80) into the address bar, as shown above.

8 Enter the DVR username and password. By default, the username is **admin**, and the password is **000000**.

9 Click **Login** to access your DVR. You will be prompted to change the password for your system.

10 Enter a new 6 character password and click **OK**.

11 Enter the new password under **Password** and click **Login**. Safari connects to your DVR and streams live video from your cameras.

Accessing your DVR Remotely over the Internet

Setting up remote connectivity allows you to view your DVR from any computer or compatible mobile device with Internet access.

NOTE: Except where noted, the instructions below are the same for PC and Mac.

To set up remote connectivity with your DVR, you must:

1. Port forward the HTTP and Client Ports (default: **80** and **9000**) on your router to your DVR's IP address.
2. Create a DDNS account.
3. Enable DDNS on the DVR.
4. Test the remote connection by connecting to the DDNS address.

Step 1 of 4: Port Forwarding

You **must** port forward the HTTP and Client ports (default: **80** and **9000**) on your router to your DVR's IP address before you can remotely connect to your system. There are several methods to port forward your router:

- Manually port forward the required ports on your router to your DVR's IP address by following your router manufacturer's instructions. For more information on port forwarding, see the reference guides on www.flirsecurity.com/pro.
- Use the **Auto Port Forwarding Wizard** (PC only) to port forward the required ports (visit www.flirsecurity.com/pro for the Wizard software and manual).

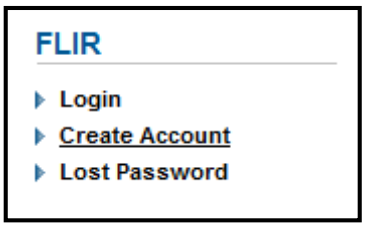
NOTE: If the above ports are not forwarded on your router, you will not be able to access your system remotely.

Step 2 of 4: Create a DDNS Account

FLIR offers a free DDNS service for use with your system. A DDNS account allows you to set up a web site address that points back to your local network. This allows you to connect to your system remotely. **You must create a DDNS account in the same network as your DVR.**

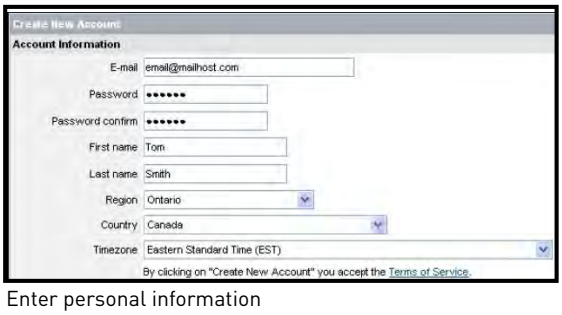
To setup your free FLIR DDNS account:

1. In your browser, go to http://ddns.myddns-flir.com and click **Create Account**.



Create a DDNS account

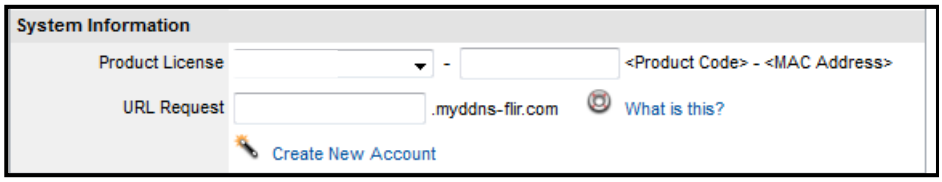
2. Complete the Account Information fields with your personal information. Complete the Warranty Information with your purchase details (optional).
3. Complete the System Information fields:
   - **Product License**: Select your product model from the Product License drop down menu (i.e. D3200 or D3300).
   - **←Product Code→ - ←MAC Address→**: Locate the MAC address of your DVR (press the ↵ button on the remote control or front panel to find the MAC address.



Enter personal information

- **URL Request**: Choose a URL for your DDNS connection (i.e. your name, your company or business name, or anything of your choice).

4 Once the information has been entered, click **Create New Account**.



5 Your Account information will be sent to you at the email Address you used in Step 2 .
You will need this information for remote access to your system. Record your information below:

User name: _

Domain name*: _

Password: _

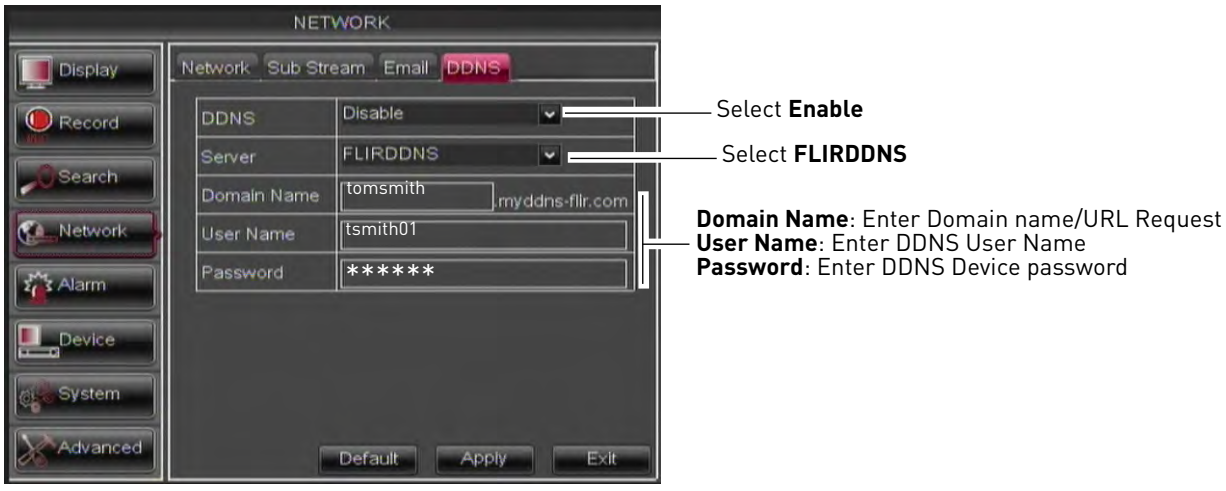
Step 3 of 4: Enable DDNS on the DVR

To enable DDNS in your DVR:

1 Right-click to open the Menu Bar and click the Main Menu button ( ).

2 Click **Network** and select the **DDNS** tab.

3 In the **DDNS** drop-down menu, select **Enable**. Beside Server, select **FLIRDDNS** (default).



4 Under **Domain Name**, enter your **Domain name/URL Request** from the confirmation email that was sent after you created your DDNS account.

5 Under **User Name**, enter your **DDNS User Name** that was emailed to you after DDNS registration.

6 Under **Password**, enter your **DDNS Device password** that was emailed to you after DDNS registration.

7 Click **Apply** to save your settings.

NOTE: Please allow 10~15 minutes for the DDNS servers to update with your new DDNS address before attempting to connect.

Step 4 of 4: Connect to the DDNS Address

To Connect to the DDNS Address Using the Client Software on PC:

1 Install and run the Client software for PC on a remote computer.

2 Enter the following information:

- **IP Address:** Enter the **URL Request** followed by **.myddns-flir.com**. For example, if your URL Request is tomsmith, enter tomsmith.myddns-flir.com
- **User Name:** The default user name is **admin**.
- **Password:** Enter the DVR password you created earlier.
- **Client Port:** By default, this is **9000**.

3 Click **Login** to access your DVR. Client software for PC connects to your DVR and streams live video from your cameras.

To Connect to the DDNS Address Using Safari on Mac

To access your DVR remotely, enter the DDNS address that you created earlier into Safari (Mac). The DDNS address must include **http://** , the name of your DDNS URL, followed by **.myddns-flir.com**, **a colon**, and then the **HTTP port number of your DVR**.

For example:

Example of a DDNS address

http://tomsmith.myddns-flir.com:80

http://

DDNS Domain name created by you

.myddns-flir.com

Colon

HTTP Port number

Once you have entered your DDNS address into Safari, enter the DVR user name (default: **admin**) and password you created earlier at the login screen and click **Login**.

Remote Viewing Interface

Upon login, the Live tab opens. The Remote Viewing interface is the same for Internet Explorer, PC Client Software, or Safari on Mac.

1 **Navigation Tabs**: Allows you to access the following tabs:
- **Live**: Watch live video.
- **Playback**: View saved video footage.
- **Remote Setting**: Configure system and networking options.
- **Local setting**: Configure where local files are stored on your hard drive.
- **Logout**: Exits remote viewing.

2 **Active Channel List**: Displays channels that are currently live.

3 **Viewing options**:
- : Click to open all connected channels.
- : Click to close all connected channels. Note that the system continues to record when you close channels remotely.
- : Previous page.

- : Next page.
- : Click to open the selected channel in full screen view.
- : Click to select the desired split-screen viewing options.

4 **Split screen viewing**: Click the desired viewing mode.

5 **Mute**: Click to mute audio.

6 **Main Screen**: Main display screen for live viewing and playback. You can also drag the screens to any desired position.

7 **PTZ Controls**: PTZ (Pan, Tilt, Zoom) control for connected PTZ cameras (not included).

Changing Viewing Modes

You can change the number of channels that the system displays simultaneously (i.e. Split-screen Mode, Single-channel Mode, etc.).

To change the DVR's viewing mode:

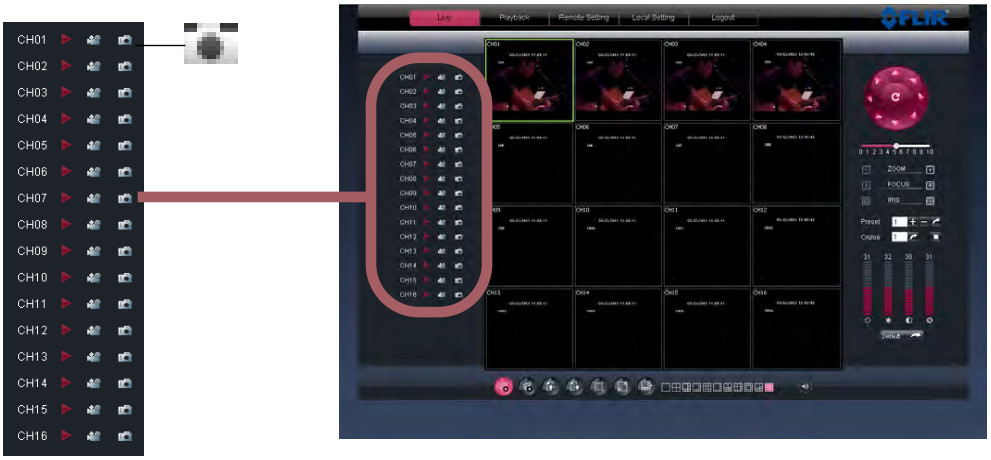
- Click one of the following: .
  - If the controls are not shown, click .

Taking Screen Shots

The system can take screen shots of a selected channel during live view.

To take a screen shot of a channel:

1 Click beside the desired channel to capture an image.



2 A pop-up window opens on the bottom left corner of the window. Click **Preview** to view the image or **Folder** to show the image in the save folder.

If you receive an error taking a screen shot:

You may receive an error when taking a screen capture. This is caused by an Internet Explorer security setting.

To reduce the security setting in Internet Explorer:

1 Click on **Tools→Internet Options** (in IE9 and above, click the gear icon on the top-right corner).

2 Click the **Security** tab.

3 De-select **Enable Protected Mode**.

4 Click **Apply** to save your settings.

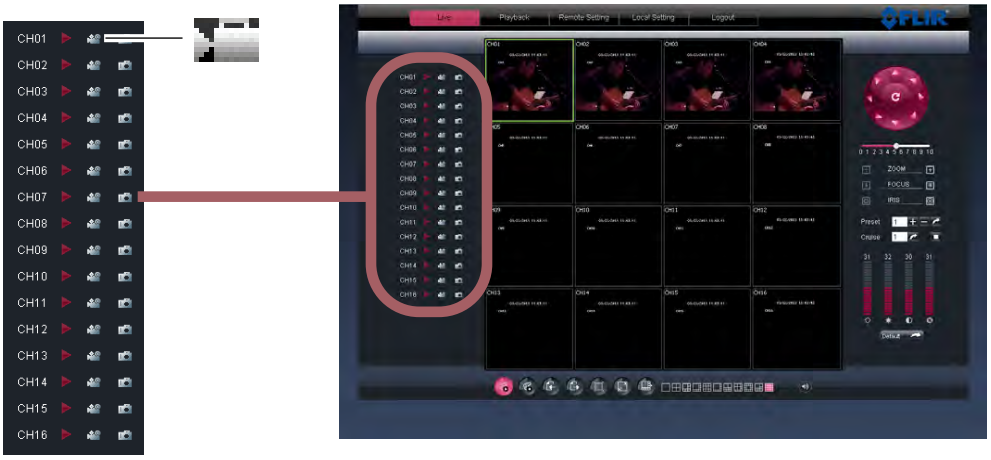
5 Refresh Internet Explorer.

Recording Video

You can record video footage directly onto your local hard drive. Once the video is in your hard drive, you can back up the video footage onto record-able media such as USB memory keys and blank CD/DVD media.

To record video:

1 Click [redacted] next to the channel that you wish to capture video from. The video will record to the default save directory.



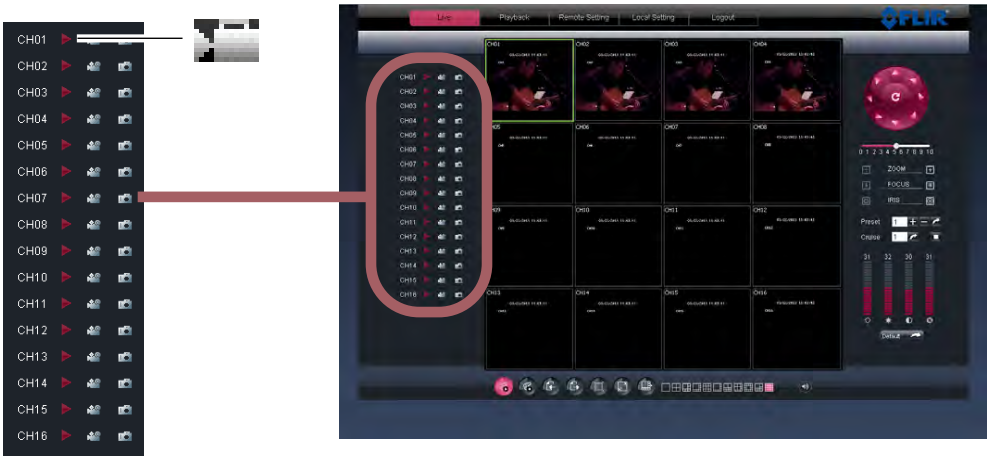
2 Click [redacted] to stop video recording.

Showing / Hiding Channels

The Active Channel List is a convenient way to show / hide the cameras that display in the main viewing window.

To show or hide video in the main video window:

1 Click beside the channel number to show a channel. Click again to hide the channel.



Adjusting Sub-menu Options

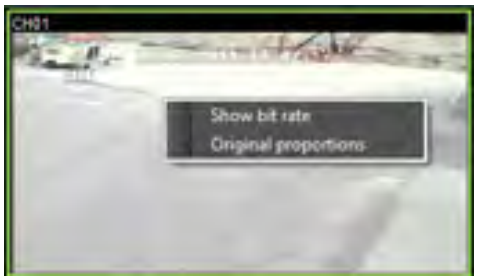
The sub-menu option gives you quick access functions such as viewing video bit rate, and viewing video in its original aspect ratio.

To open the sub-menu:

1 Right-click on a desired channel. A sub-menu opens.

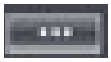
2 Click on one of the following:

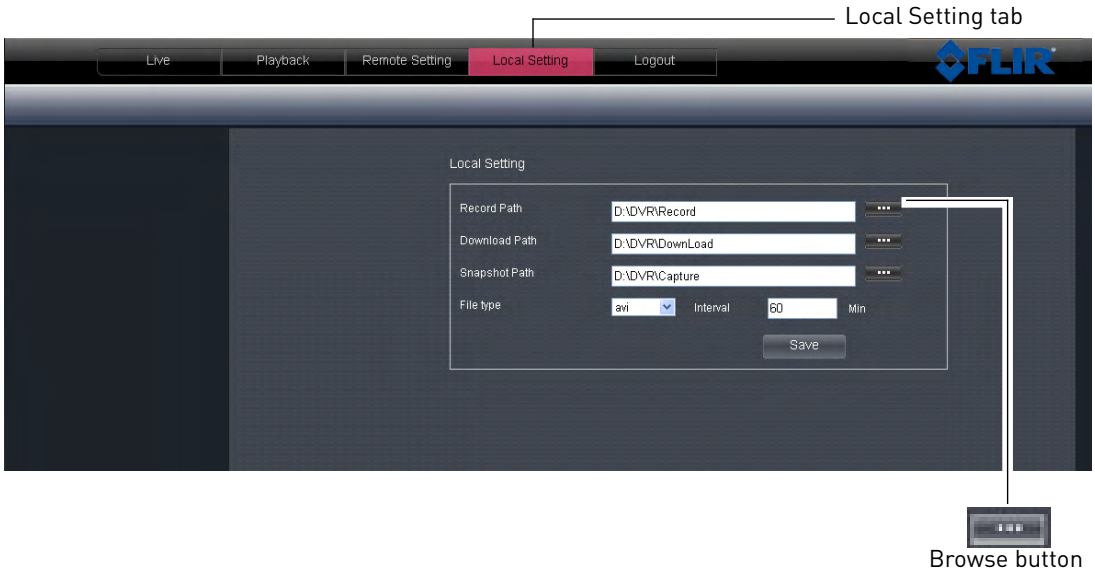
- **Show Bit rate**: Displays video bit rate.
- **Original Proportions**: Displays live video in its original proportions.



Changing the Save Directory of Screenshots or Recorded Video

1 Click the **Local Setting** tab.

2 Click  beside the desired category to browse for a save directory.



3 Select the desired save directory, and then click **OK**.

4 Click **Save** to save your changes.

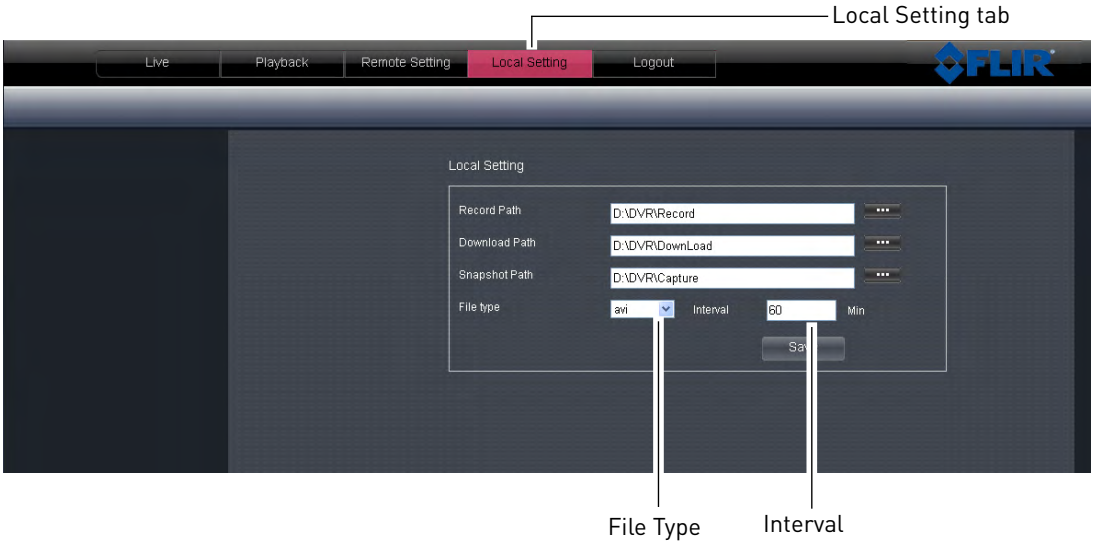
Changing the Format of Recorded Video (PC Only)

You can change the format of recorded video saved using the Remote Viewing interface. This allows you to directly backup footage from your DVR as an .avi file. This does not affect the format of video files that are backed up locally on the DVR (i.e. using a USB flash drive).

NOTE: This feature is not available via Mac.

1 Click the **Local Setting** tab.

2 Under **File Type**, select the file format you would like to use when saving video (**264** or **avi**).



3 (Optional) Under **Interval**, select the maximum length (in minutes) for video saved on the remote computer.

4 Click **Save** to save your changes.

Configuring PTZ Settings

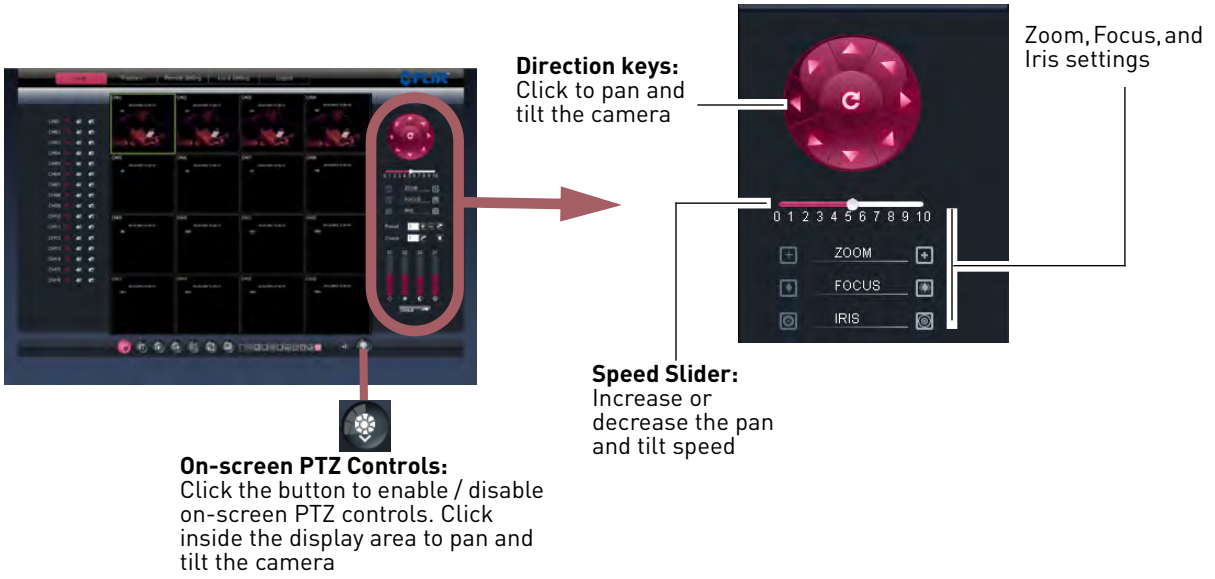
The system supports remote PTZ controls for compatible PTZ cameras (not included).

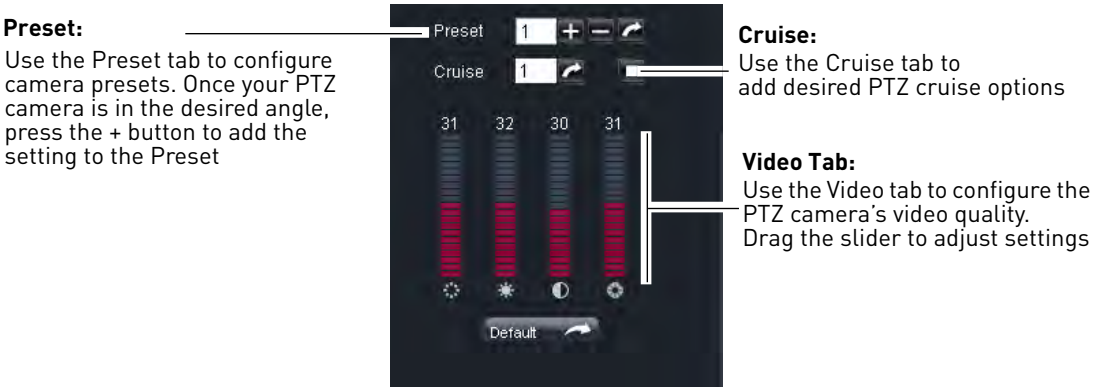
- For details on connecting PTZ cameras to your system, see "Appendix B: Connecting a PTZ Camera" on page 147.

To control the PTZ settings on the DVR:

1 From the Live tab, double-click to select the channel the PTZ camera is connected to.

2 Use the PTZ control panel to control the pan, tilt, zoom, focus, and iris control of the camera.


Direction keys:
Click to pan and tilt the camera
Zoom, Focus, and Iris settings
0 1 2 3 4 5 6 7 8 9 10
ZOOM
FOCUS
IRIS
Speed Slider:
Increase or decrease the pan and tilt speed
On-screen PTZ Controls:
Click the button to enable / disable on-screen PTZ controls. Click inside the display area to pan and tilt the camera


Preset:
Use the Preset tab to configure camera presets. Once your PTZ camera is in the desired angle, press the + button to add the setting to the Preset
Preset
1
Cruise
1
31
32
30
31
Default
Cruise:
Use the Cruise tab to add desired PTZ cruise options
Video Tab:
Use the Video tab to configure the PTZ camera's video quality. Drag the slider to adjust settings

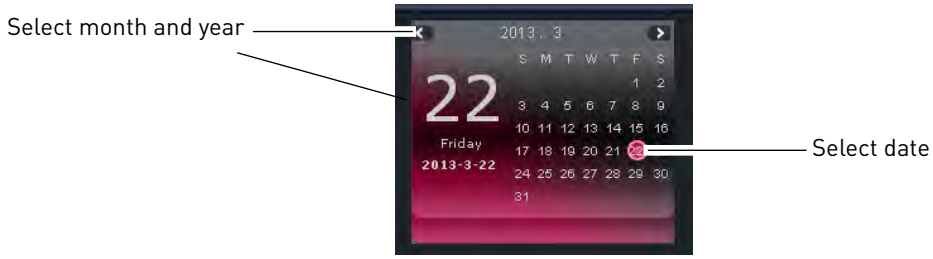
Video Playback

Video playback allows you to watch video that has been saved in the DVR's hard drive.

To playback video:

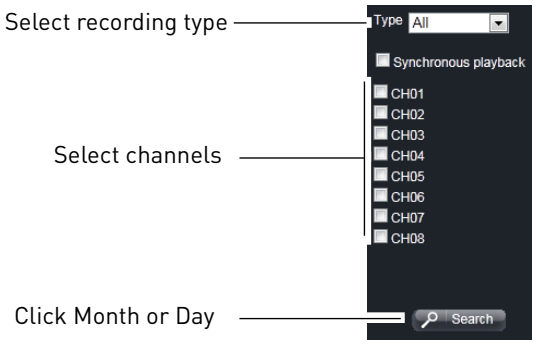
1 Click the **Playback** tab.

2 In the calendar window, click the desired month, year, and date.



3 Under the **Type** drop-down menu, select the desired recording type you wish to search for (Continuous, Alarm, or All).

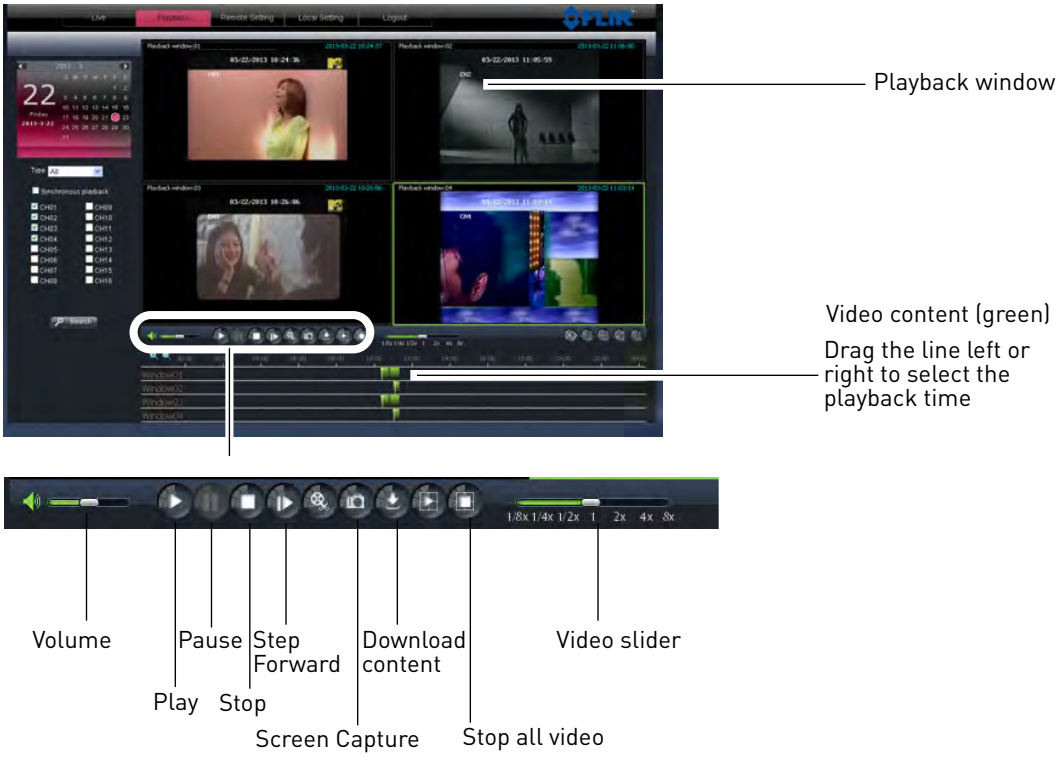
4 Select the channels you wish to search. Check **Synchronous playback** to play all selected channels at the same time.



5 Click the **Search** button.

6 Click **Play** to begin playback.

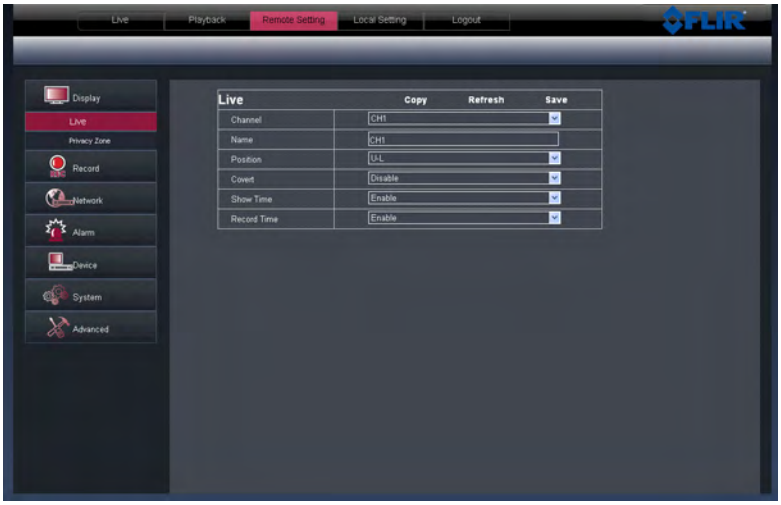
Video Playback Controls



- **Step Forward**: Plays video frame by frame. Click the Step Forward button to advance the video by 1 frame.
- **Video Slider**: Drag the slider to control the playback speed.
- **Download Content**: Allows you to download recorded videos to your computer hard drive. To download video, click the channel you want to back up and click the Download content button. A list of files appears. Select the files you want to back up and click **Start Download**.

Configuring Display Settings

1 Click the **Remote Setting** tab, and then click **Display→Live.**



2 Configure the following:

- **Channel**: Select the channel you want to modify.
- **Name**: Enter the channel name if you want to re-name the channel
- **Position**: Select the position of where the title appears in the channel.
- **Covert**: **Enable** or **Disable** covert recording. Covert recording will hide the channel on the DVR's local display. You will see be able to see the channel when you log in remotely.
- **Show Time**: Select **Enable** or **Disable** to show or hide the time on the DVR's local display.
- **Record Time**: Select **Enable** or **Disable** to show or hide the record time on the remote display.

3 Click **Save** to apply your settings.

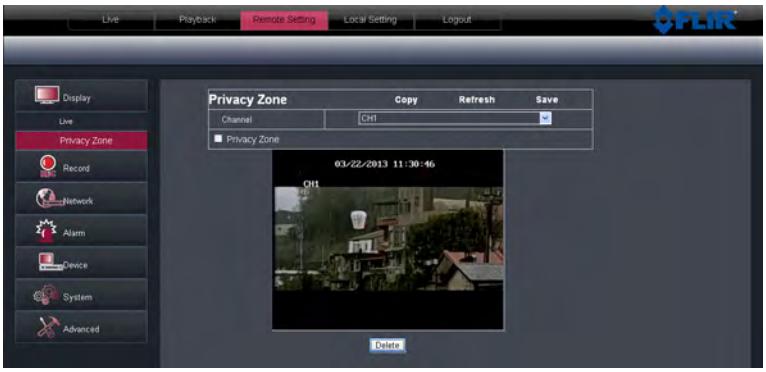
Configuring Privacy Zone Settings

ATTENTION: Areas covered by privacy zones are not visible in recordings.

You can blank out a certain portion of the channel with a black box.

To configure a privacy zone:

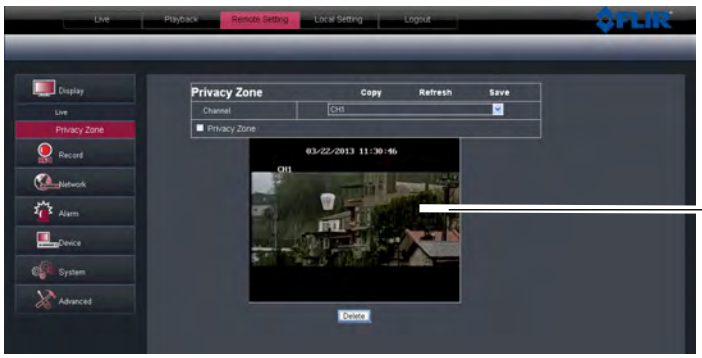
1 Click the **Remote Setting** tab, and then click **Display→Privacy Zone**.



2 In the **Channel** drop-down menu, select the channel you wish to configure.

3 Select the **Privacy Zone** checkbox to enable privacy masking.

4 Drag your mouse cursor over the areas you wish to black out. A red box indicates the area that is masked (blocked out).



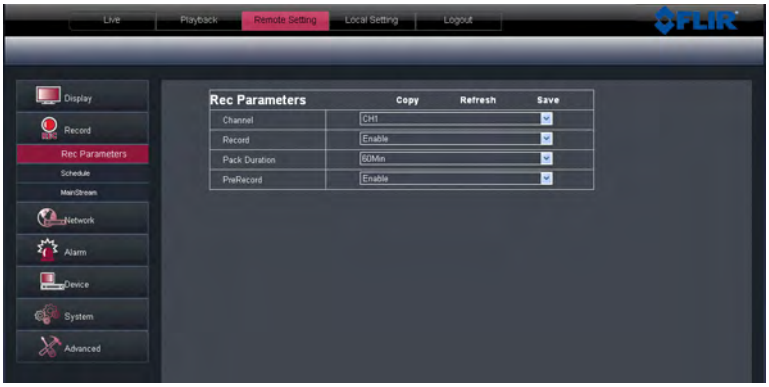
- To remove a privacy area, click on the red box, then click the **Delete** button.

5 Click **Save** to apply your settings.

Configuring Recording Parameters

To configure system recording parameters:

1 Click the **Remote Setting** tab, and then click **Record→Rec Parameters.**



The recording schedule is arranged as a grid. Each row represents a recording type (Continuous, Motion, and Alarm), and each box represents an hour.

2 Configure the following:

- **Channel**: Select the channel you wish to configure.
- **Record**: Select **Enable** or **Disable** to start or stop system recording.
- **Pack Duration**: Select the duration of each saved file on the system. For example, if you select 15 minutes, then every file will contain 15 minutes of footage.

NOTE: Pack Duration settings are not supported on D3316/D3332. D3316/D3332 packages video files into files of a maximum size of 255MB.

- **Pre-record**: Select whether to enable or disable pre-recording.

3 Click **Save** to apply your settings.

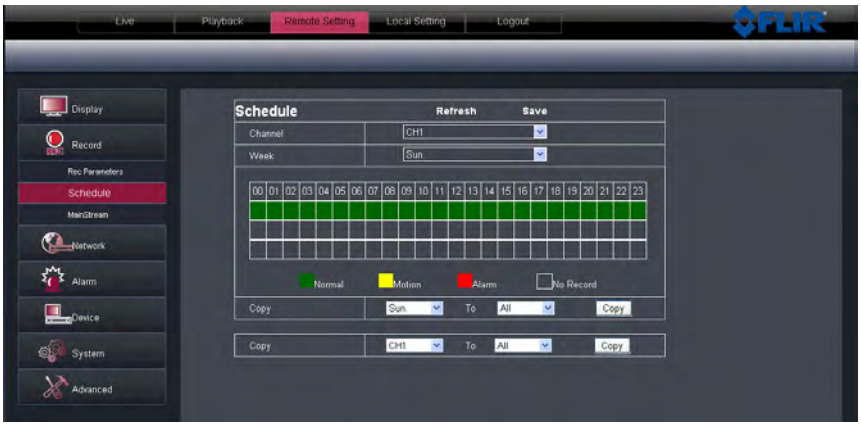
Configuring the Recording Schedule

To configure the recording schedule:

1 Click the **Remote Setting** tab, and then click **Record→Schedule.**

2 Configure the following:

- **Channel:** Select the channel you wish to configure.
- **Week:** Select the day of the week you would like to apply the settings to.



3 Click the recording grid, and select the type and duration of recording.

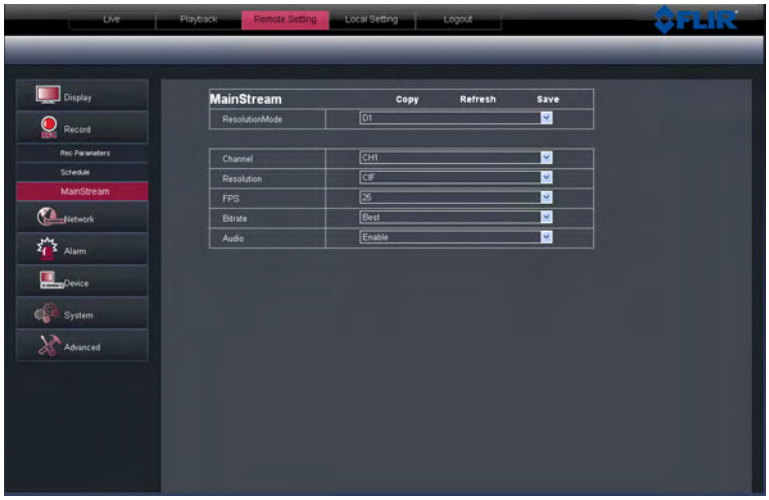
4 (Optional) Use the top **Copy** and **Copy To** drop-down to copy the recording schedule to a specific day or all days. Click **Copy** to copy the schedule.

5 (Optional) Use the bottom **Copy** and **Copy To** drop-down to copy the recording schedule to a specific channel or all channels. Click **Copy** to copy the schedule.

6 Click **Save** to apply your settings.

Configuring System Recording Quality

1 Click the **Remote Setting** tab, and click **Record→MainStream**.



2 Under **Resolution Mode**, select **D1** or **960H**. If you do not have 960H-compatible cameras, it is recommended to select D1, as D1 will provide a higher number of total frames per second (FPS) for recording. If you change the Resolution Mode setting, the system will restart once you save your changes.

3 Configure the following:

- **Channel:** Select the channel you wish to apply the settings to.
- **Resolution**: Select the desired recording resolution.
- **FPS (Frame Rate)**: Select the desired recording frame rate. Note that higher frame rates require greater bandwidth consumption during remote viewing.
- **Audio**: Select whether you want the system to record audio (audio cameras required, not included).

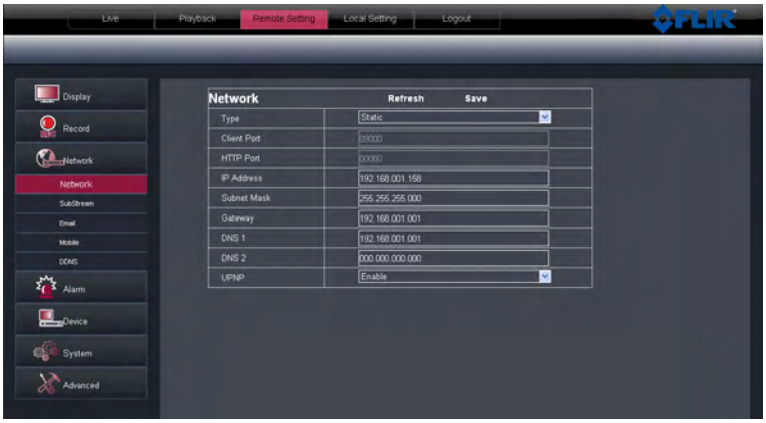
4 Click **Save** to apply your settings.

Configuring Basic Network Settings

The basic network menu allows you to configure the network protocol type (DHCP or Static), UPnP and mobile phone login information.

To configure basic network settings:

1 Click the **Remote Setting** tab, and click **Network.**



2 Configure the following under Basic Configuration:

- **Type**: Select between **DHCP** or **Static**. If you select Static, you can edit the IP address, Subnet Mask, Gateway, and DNS settings.
- **Auto Port Forwarding**: Select **Enable** or **Disable** to enable or disable the Auto Port Forwarding feature.

3 Click **Save** to apply your settings.

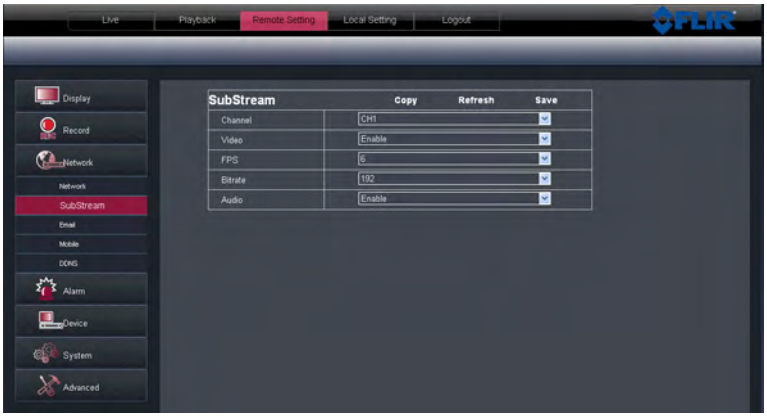
Configuring the System Substream

You can adjust the data streaming rate (also called the SubStream) when you connect to the system remotely. If you want to conserve bandwidth, select a lower frame rate and bitrate.

NOTE: Setting your system to stream with a lower frame and bitrate may cause the video to appear choppy or slow.

To configure the system's substream:

1 Click the **Remote Setting** tab, and click **Network→SubStream**.



2 Configure the Substream settings:

- **Channel**: Select the channel you wish to apply the settings to.

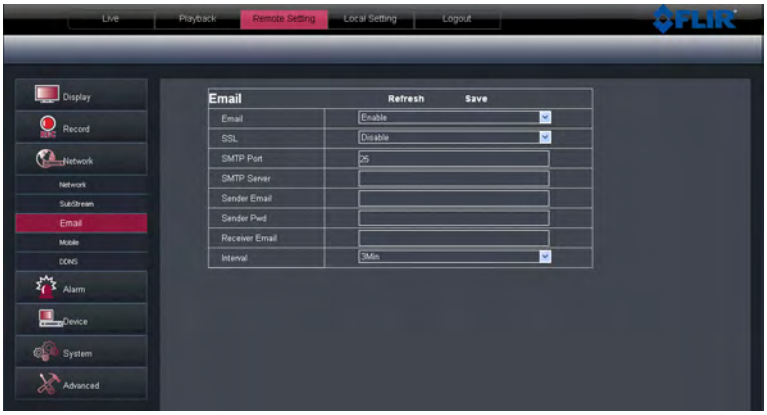
- **Resolution**: Select the desired recording resolution.
- **FPS (Framerate)**: Select the desired recording frame rate. Note that higher frame rates require greater bandwidth consumption during remote viewing.
- **Bit Rate**: Select the desired video bit rate.
- **Audio**: Select whether you want the system to record audio (audio cameras required, not included).

3 Click **Save** to apply your settings.

Configuring Email Notification Settings

To configure email notification settings:

1 Click the **Remote Setting** tab, and click **Network→ Email**.



2 In the Email drop-down menu, select **Enable**.

3 Configure the following:

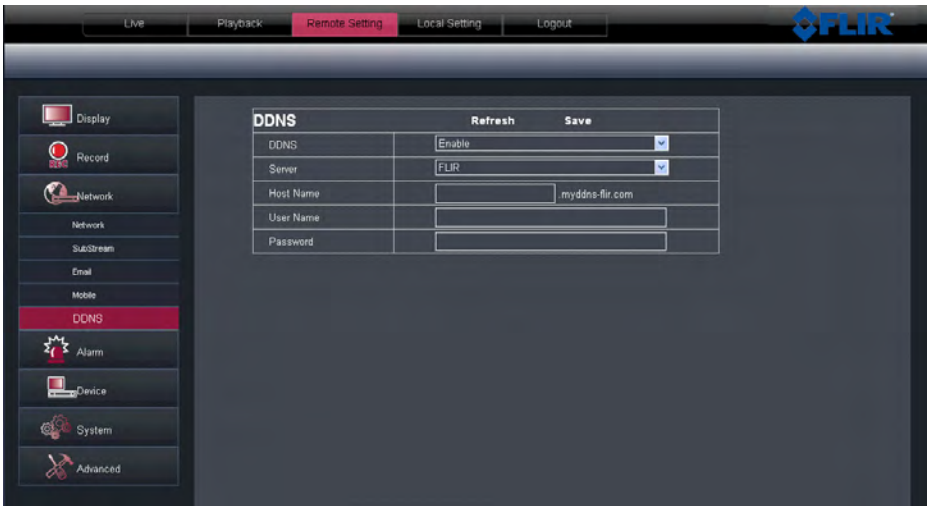
- **SSL**: Select **ON/OFF** to enable/disable Secure Socket Layer protocol.
- **SMTP Port**: Enter your SMTP address.
- **SMTP Server**: Enter your SMTP Server.
- **Sender Email**: Enter the sender email address. This can be any address of your choice.
- **Sender Password**: Enter your email server's password.
- **Receiver Email:** Enter the recipient's email address.
- **Interval:** Enter the interval the DVR waits before sending a new email notification.

4 Click **Save** to save your settings.

Configuring DDNS Settings

To configure DDNS settings:

1 Click the **Remote Setting** tab, and click **DDNS.**



2 Configure the following:

- **DDNS**: Select **Enable** or **Disable**.
- In the **Server** drop-down menu, select **FLIRDDNS**.
- **Domain Name**: Enter your **Domain name/URL Request** from the confirmation email that was sent after you created your DDNS account.
- **User name**: Enter your **DDNS User Name** that was emailed to you after DDNS registration.
- **Password**: Enter your **DDNS Device password** that was emailed to you after DDNS registration.

3 Click **Save** to apply your settings.

Configuring Motion Detection Settings

To configure motion settings:

1 Click the **Remote Setting**, and click **Alarm→Motion.**

2 Configure the following motion recording parameters:

- **Channel**: Select the channel you wish to apply the settings to.
- **Enable**: Select this checkbox to enable motion recording.
- **Sensitivity**: Select the desired motion detection sensitivity. The greater the value, the greater the motion sensitivity.

- **Buzzer**: Select **OFF** to disable the buzzer when the system detects a motion event or select the duration of the buzzer after the system detects a motion event.

Click and drag to configure motion detection areas
Red: Motion detection enabled
Clear: Motion detection disabled

- **Alarm Out**: Select the checkbox to trigger connected alarm devices.
- **Full Screen**: Select the checkbox so that the channel goes into full screen mode when motion is detected.
- **Enable Record**: Select to enable system recording when motion is detected.
- **Post Recording**: Select the post-recording time after a motion event occurs.
- **Record Channel**: Select the channels that should record during a motion event.
- **Show Message**: Select the checkbox to enable the system to display a warning message during a motion event.
- **Send Email**: Select the checkbox for the system to send a email notification during a motion event.

3 Drag your mouse cursor in the window to select the desired area to monitor the channel for motion.

4 Click **Save** to apply your settings.

Configuring your System to "Beep" During Motion

You can set your system to "beep" during motion. This is useful to notify you if someone enters or exits an area.

To configure the system to "beep" during motion:

1 Click the **Remote Setting** tab, and click **Alarm→Motion**.

2 In the **Channel** drop-down menu, select the channel you wish to configure.

3 Select the **Enable** checkbox.

4 Beside the **Buzzer** drop-down menu, select the "beep" duration or select **OFF** to disable the "beep."

5 In the video window, select the area you wish to monitor for motion.

6 Click **Save** to apply your settings.

Result: The system beeps when it detects motion, and a green "M" icon appears. The green "M" icon indicates that the system is only detecting motion, but not recording. To have the

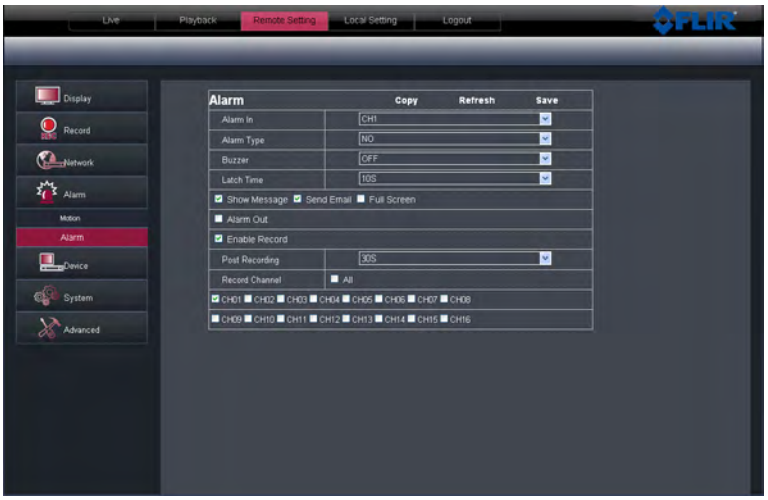
system record motion events, enable motion recording in the recording calendar (**Remote Setting tab→Record→Schedule**).

Configuring Alarm Notifications

Configure the settings for alarm devices (not included).

To configure alarm notifications:

1 Click the **Remote Setting** tab, and click **Alarm→Alarm.**



2 Configure the following:

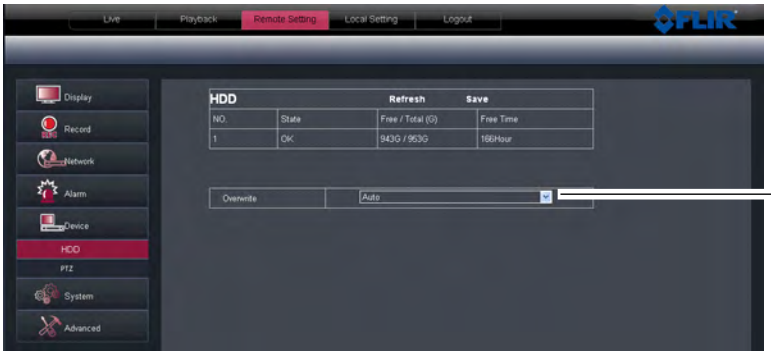
- **Alarm In**: Select the channel that you wish to configure.
- **Alarm Type**: Select the alarm type **N/O** (normally open), **N/C** (normally closed), or select **OFF**.
- **Buzzer**: Select the "beep" duration when an event occurs.
- **Latch Time**: Select the desired latch time when an alarm triggers.
- **Show Message**: Select the checkbox so that the system displays a warning message during an alarm recording.
- **Send email**: Select the checkbox for the system to send out email alerts during alarm recording.
- **Full Screen**: Select the checkbox to enable the system to go into Full-screen View when an alarm triggers.
- **Alarm out**: Select the checkbox to enable alarm out devices to activate.
- **Enable Record:** Select the checkbox to enable system recording when an alarm triggers.
- **Post Recording**: Select the desired post recording time after an alarm triggers.
- **Record Channel**: Select the channels that the system should record during an alarm trigger.

3 Click **Save** to apply your settings.

Configuring Hard Drive Recording Mode

To configure the hard drive recording mode:

1 Click the **Remote Setting tab**, and click **Device→HDD**.



2 In the Overwrite drop-down menu, select **Auto** to enable overwrite mode. When overwrite is enabled, the system deletes the oldest footage (first in, first out) when the hard drive is full.

You can also select a desired amount of days or hours the system should retain data. For example, if you select 30 days, the hard drive will begin to overwrite itself after 30 days. Note that your hard drive must be large enough to store video for the selected duration.

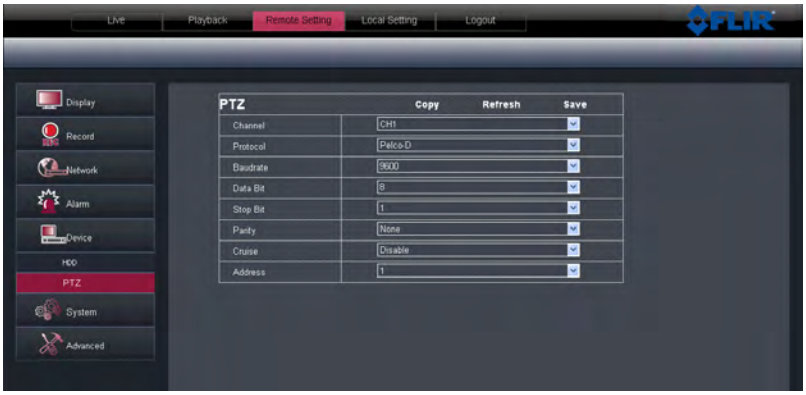
3 Click **Save** to apply your settings.

Configuring PTZ Parameters

The system is capable of manipulating PTZ cameras (not included) that are connected to the system. Please note that you will need PTZ information from the PTZ camera manufacturer's users guide. For details on connecting a PTZ camera to your system, see "Appendix B: Connecting a PTZ Camera" on page 147.

To configure PTZ settings:

1 Click the **Remote Setting** tab, and click **Device→PTZ.**



2 Configure the following:

- **Channel**: Select the channel that the PTZ camera connects to.
- **Protocol**: Select the protocol of the PTZ camera*.
- **Baud Rate**: Select the baud rate of the PTZ camera*.

- **Data Bit**: Select the data bit rate of the PTZ camera*.
- **Stop Bit**: Select the stop bit rate of the PTZ camera*.
- **Parity**: Select the parity settings of the PTZ camera*.
- **Cruise**: Select Enable or Disable*.
- **Address**: Select the address of the PTZ camera*.

*Consult the PTZ camera's instruction manual for protocol and configuration details.

3 Click **Save** to apply your settings.

Configuring the System Time and Date

To configure the system time and date:

1 Click the **Remote Setting** tab, and click **System→General**.

2 Configure the system format and time:

- **System Time**: Enter the desired system time and date. An on-screen calendar appears when you click the date.
- **Date Format**: Select the desired format the date is displayed in.
- **Time Format**: Select between 12 hour or 24 hour time formats.

3 Select **DST** to enable daylight savings time, or **NTP** to sync the time with a NTP time server.

NOTE: Using the NTP feature requires that your DVR have a constant Internet connection.

Changing the System's Menu Time Out

To change the system's time out menu:

1 Click the **Remote Setting** tab, and click **System→General**.

2 In the **Menu Timeout** drop-down menu, select the duration the menu stays on screen before disappearing.

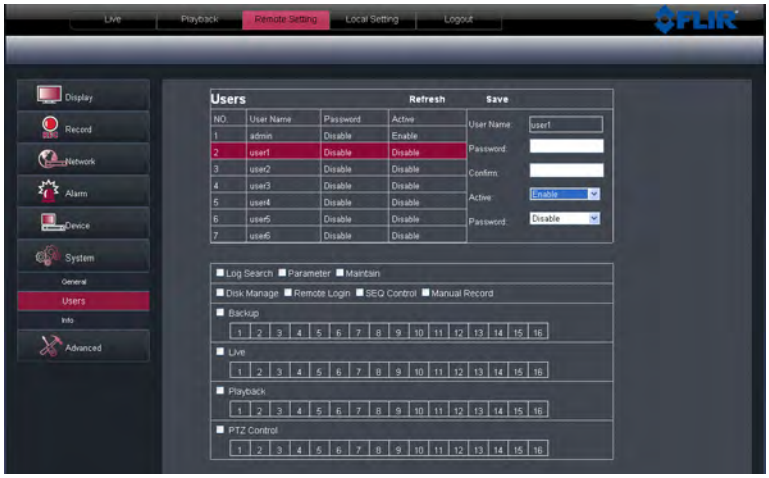
3 Click **Save** to apply your changes.

Configuring System User Accounts

You can add user accounts on the system.

To configure the user accounts menu:

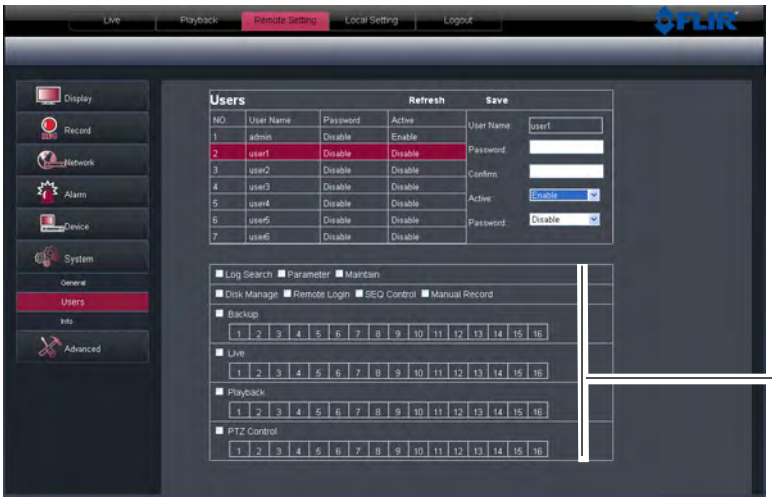
1 Click the **Remote Setting** tab, and click **System→Users**.



2 Configure the following:

- Click the desired user you wish to configure (i.e. user1).
- **User name**: Enter the desired user name.
- **Password**: Enter the desired user password.
- **Confirm**: Re-enter the user password.
- **Active**: Select **Enable** or **Disable** to activate or de-activate a user account.
- **Password**: Select **Enable** to require a user password when users log on.

3 Select the menus that the user will have access to.



4 Click **Save** to apply your settings.

Viewing System Information

To view system information:

1 Click the **Remote Setting** tab, and click **System→Info**.

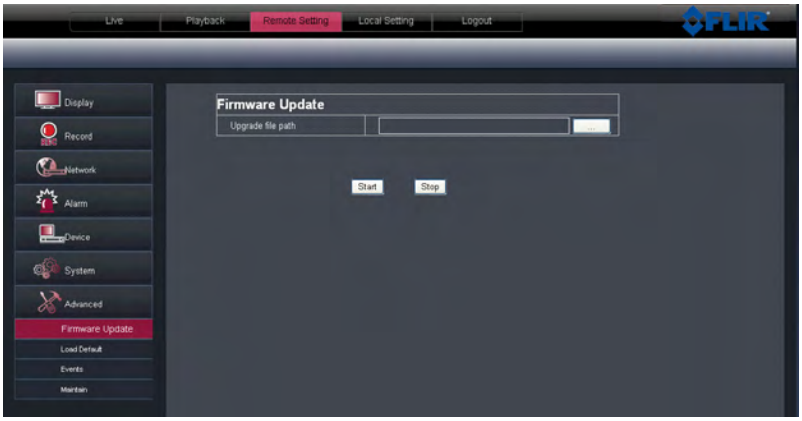
Upgrading System Firmware

To upgrade the system firmware, download the latest firmware from the system's product page at www.flirsecurity.com/pro.

To upgrade the system firmware:

1 Download and extract the file to your computer's desktop.

2 Click the **Remote Setting tab**, and click **Advanced→Firmware upgrade.**



3 Beside **Upgrade File Path**, click the browse button ( ). Locate the firmware, and click **Open**.

4 Click **Start** to begin the firmware upgrade.

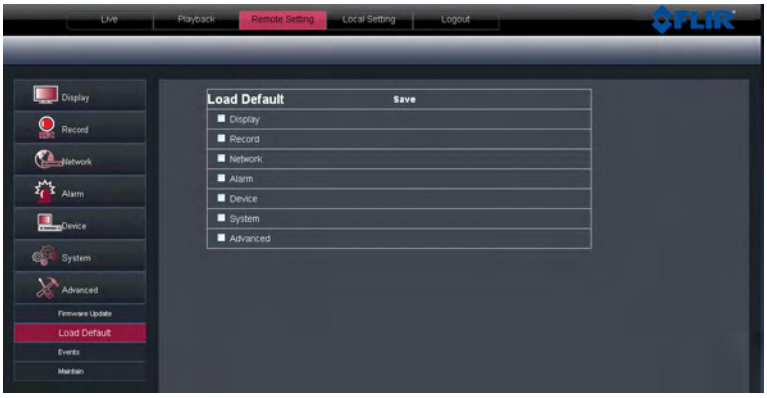
5 Follow the on-screen instructions to complete the firmware upgrade.

NOTE: Your system may have to restart after a firmware upgrade.

Restoring Default Settings

To restore the system's system defaults:

1 Click the **Remote Setting tab**, and click **Advanced→Load Default.**



2 Select the menus that you wish to restore to factory defaults.

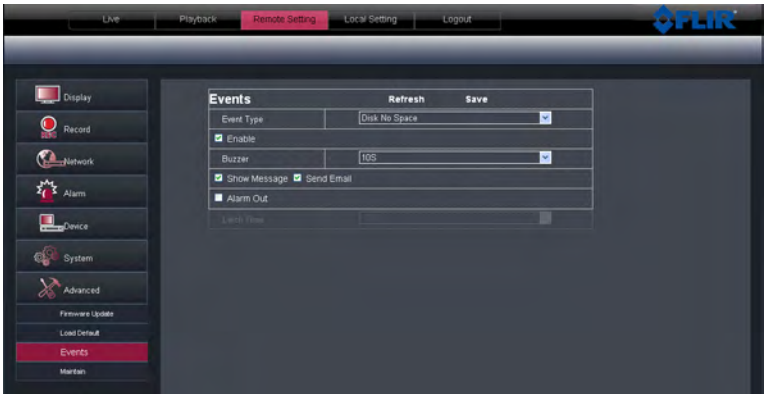
3 Click **Save** to restore system defaults for the selected items.

Configuring Event Settings

The Event Settings tab allows you to configure how the system behaves when a system event occurs (e.g. hard drive error, video loss). This is useful if you want your DVR to notify you if there is a potential system problem.

To configure the system event settings:

1 Click the **Remote Setting tab**, and click **Advanced→Events.**



2 Configure the following:

- **Event Type**: Configure the type of event that triggers the system to send an alert.
- **Enable**: Select **Enable** to activate the system to notify you if an event occurs.
- **Buzzer**: Select **OFF** to enable/disable the system buzzer or select the duration of the system buzzer after an event occurs.
- **Show Message**: Select the checkbox to enable the system to display a warning message when an event occurs.

- **Send Email**: Select the checkbox to enable email notifications. Email notification must be enabled.
- **Alarm Out**: Enable or disable the alarm out panel.
- **Latch Time**: Configure the system latch time after an event occurs.

3 Click **Save** to save changes.

Configuring Auto-Reboot

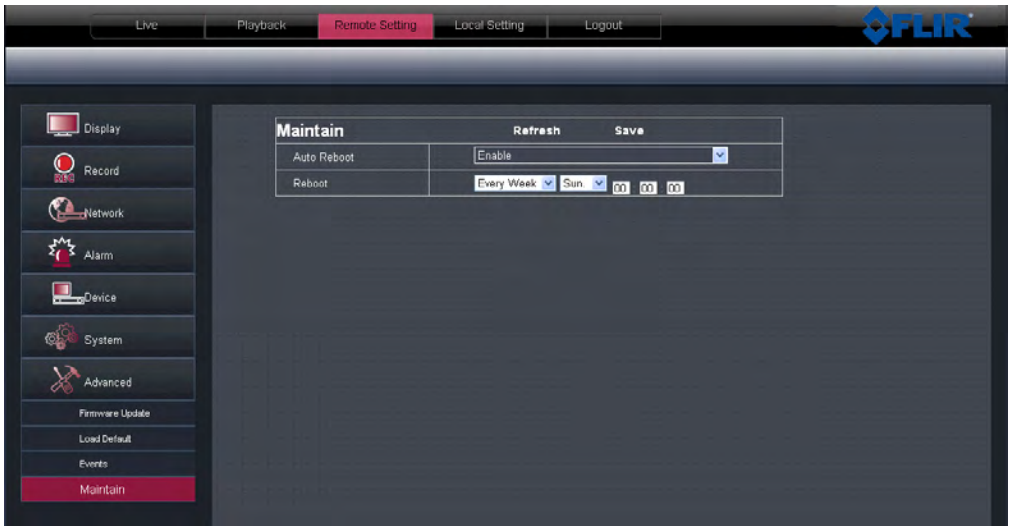
Auto-reboot allows the system to restart automatically at a set time or date. This improves system stability.

To configure Auto Maintain:

1 Click the **Remote Setting tab**, and click **Advance→Maintain.**

2 Click the **Auto Reboot** drop-down menu, and select **Enable** or **Disable** to activate or deactivate the auto-reboot feature.

3 Under **Reboot**, select how often you want the system to reboot and the time you want the system to reboot.



4 Click **Save** to apply your settings.

CMS-D3 CENTRAL MANAGEMENT SOFTWARE

CMS-D3 is a central management software that allows you to view and manage multiple FLIR D3000 Series DVRs.

System Requirements

Your system must meet the system requirements below:

	Minimum Specification
CPU	Core 2 Duo 2.4 GHz or higher
RAM	2 GB or higher
Video Card[1]	DirectX® 9.0 compatible video card NVIDIA GeForce 9500GT or higher; 512 MB video memory or higher
Network	1 Gigabit internal network recommended (including NIC, router/switch, and Cat 5e or higher RJ45 cabling) 512 MB or higher upload speed for remote connections
HDD	1 GB free, excluding space required for recording
Operating System	Windows® Vista Business, Enterprise, or Ultimate (32 bit or 64 bit) Windows® 7 Professional, Enterprise, or Ultimate (32 bit or 64 bit) Windows® 8, Windows® 8 Professional DirectX® 9.1 and above required Mac OS® 10.6 and above

1 Make sure to install video card drivers provided by the manufacturer.

Installing CMS-D3

To install CMS-D3:

- Download CMS-D3 for free from www.flirsecurity.com/pro. Extract the setup file and then double-click it.

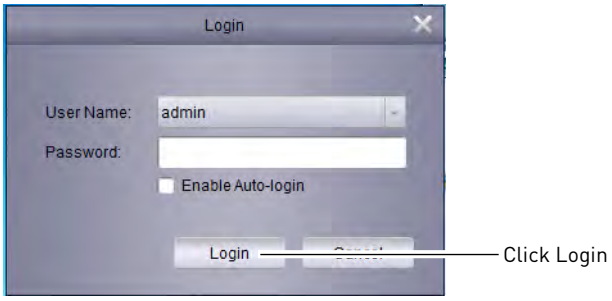
NOTE: You may receive installation warnings. This is normal. Accept the security warnings to continue.

1 Follow the on-screen instructions to install the software.

2 Click **Finish** to launch CMS-D3.

Setup - CMS-D3
Completing the CMS-D3 Setup Wizard
Setup has finished installing CMS-D3 on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Launch CMS-D3
FLIR Systems, Inc.
Finish
Click Finish

3 Click **Login** to login to the software. By default, a password is not required to log into CMS-D3.



NOTE: To open CMS-D3 from the desktop, double-click the CMS-D3 icon ( ).

Adding DVRs

Adding a DVR from the local area network (LAN)

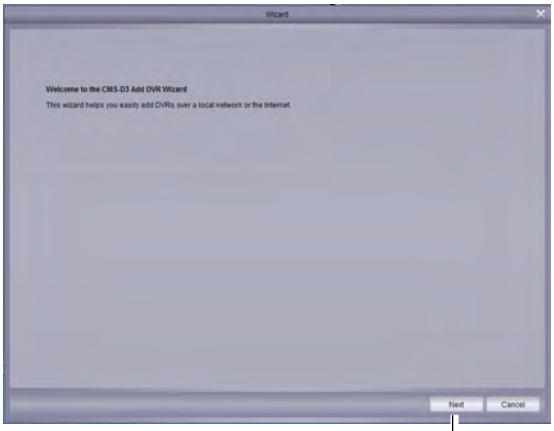
Once you open CMS-D3, you can add a DVR.

Prerequisites:

- DVR must have access to the local area network (LAN).

To add a DVR to CMS-D3:

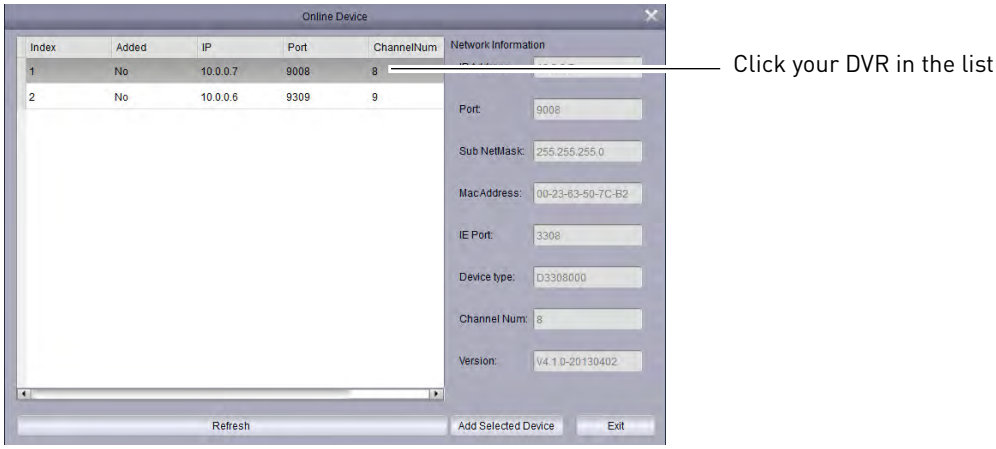
1 When CMS-D3 opens the first time, the Add Camera Wizard opens. Click **Next**.


Wizard
Welcome to the CMS-D3 Add DVR Wizard
This wizard helps you easily add DVRs over a local network or the Internet.
Next
Cancel
Click Next

NOTE: If the Add Camera does not open, click **Help→Open Wizard** to manually open it.

2 Click **Add online device**. The client software scans for DVRs on your network.

3 Click your DVR in the list and click **Add Selected Device**. The Add Device screen opens and populates the DVR's IP Address, Port, and the number of channels.



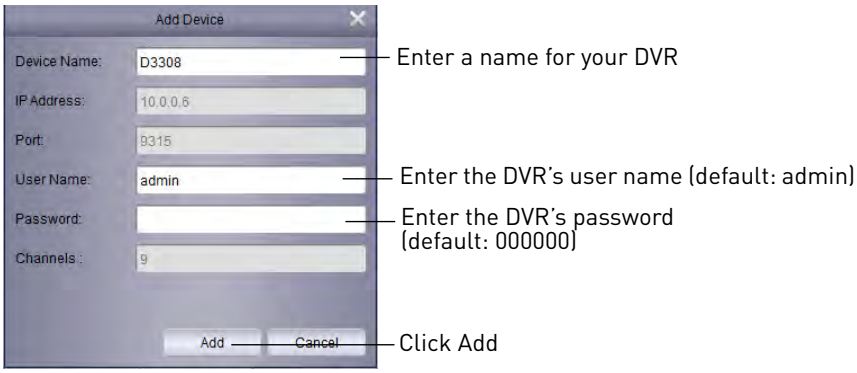
NOTE: If your DVR does not appear in the list, click **Exit→Add Device**. Then, enter the local IP Address of the DVR.

4 Under **Device Name**, enter a name for your DVR of your choice (e.g. home, business, etc.).

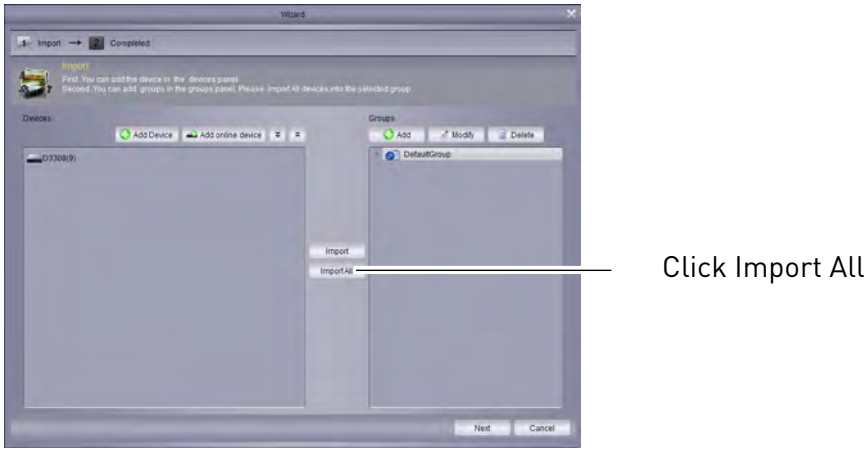
5 Under **User Name**, enter the DVR's user name (default: **admin**).

6 Under **Password**, enter the DVR's password (default: **000000**).

7 Click **Add**.

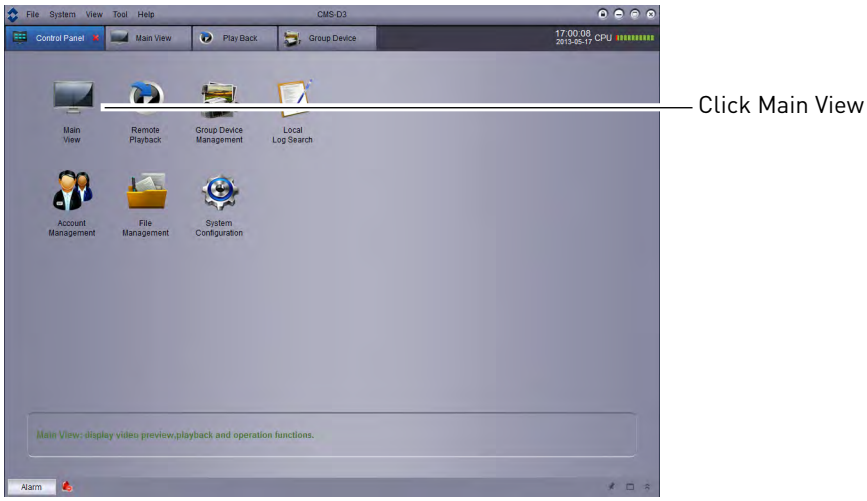


8 Click **ImportAll**. This adds all DVRs and cameras to the Default group.

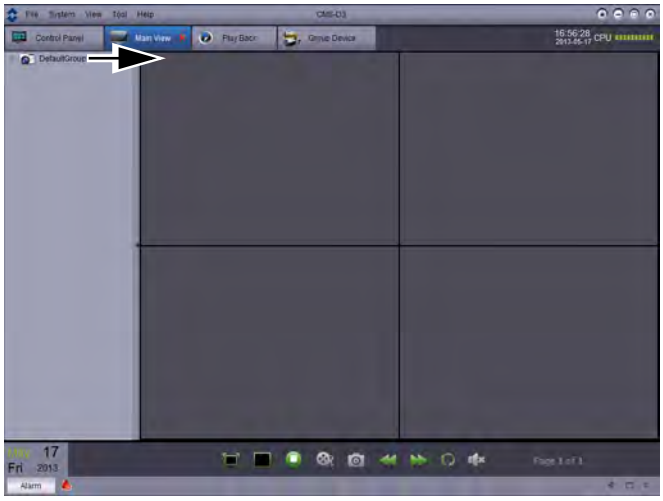


9 Click **Next** then click **Finish** to complete the Wizard.

10 Click **Main View**.



11 Click and drag **Default Group** to the display grid. You will be prompted to change the DVR password.



12 Enter a new 6 character password and click **OK**.

13 Click and drag the **Default Group** to the display grid again to view your cameras over the local network.

Adding a DVR using a DDNS address

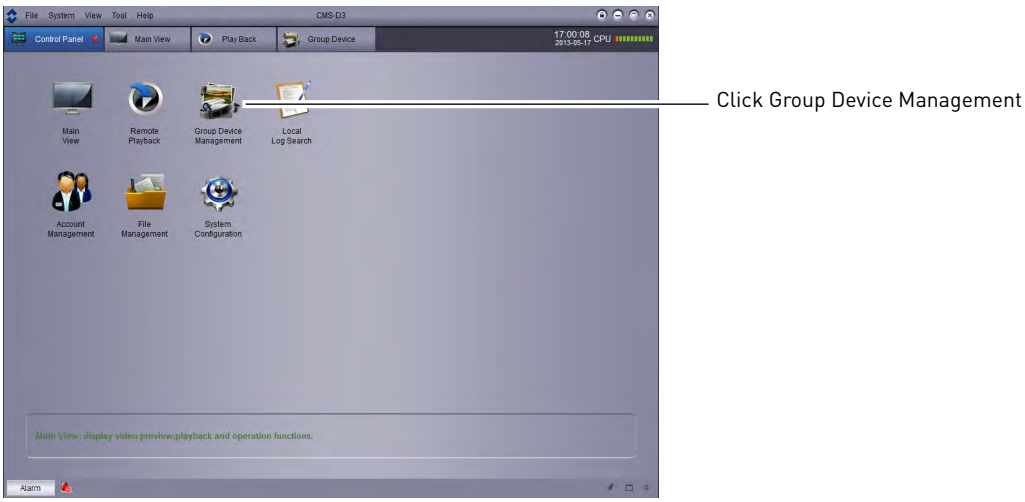
If you have DVR systems that have DDNS set up, you can add them to CMS-D3.

Prerequisites

- Create a DDNS account.
- Enter the DDNS information into the DVR locally.
- Port forward the required ports to the router.

To add a DVR using a DDNS address:

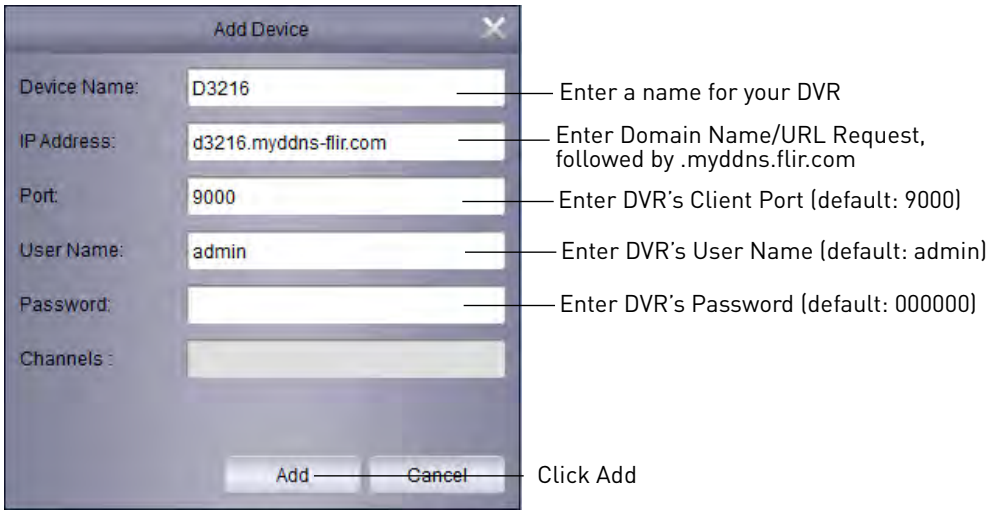
1 From the Control Panel tab, Click **Group Device Management**.



2 Click **Add Device**.

3 Configure the following:

- **Device Name:** Enter a name for your DVR of your choice (e.g. home or office).
- **IP Address:** Enter the **Domain Name** from the confirmation email, followed by **.myddns-flir.com**. For example, if your Domain Name/URL Request is tomsmith, enter tomsmith.myddns-flir.com.



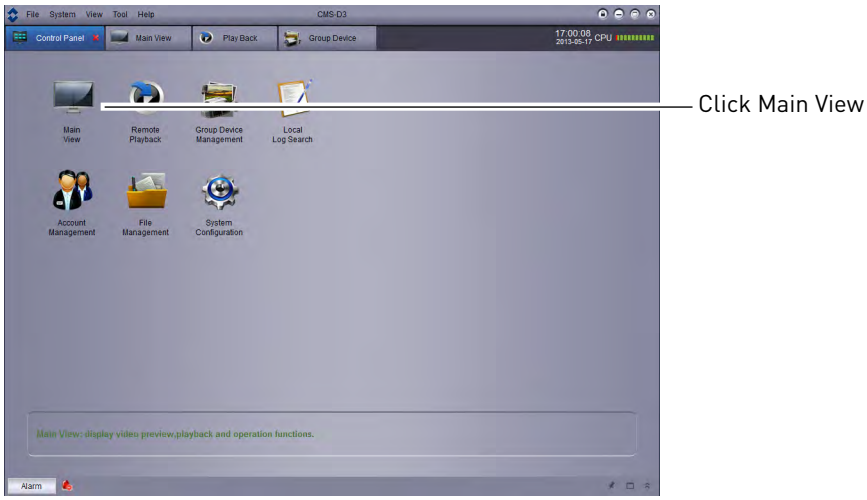
- **Port:** Enter the **DVR's Client Port** (default: **9000**).
- **User Name:** Enter the **DVR's User Name** (default: **admin**).
- **Password:** Enter the **DVR's Password** (default: **000000**).

4 Click **Add**.

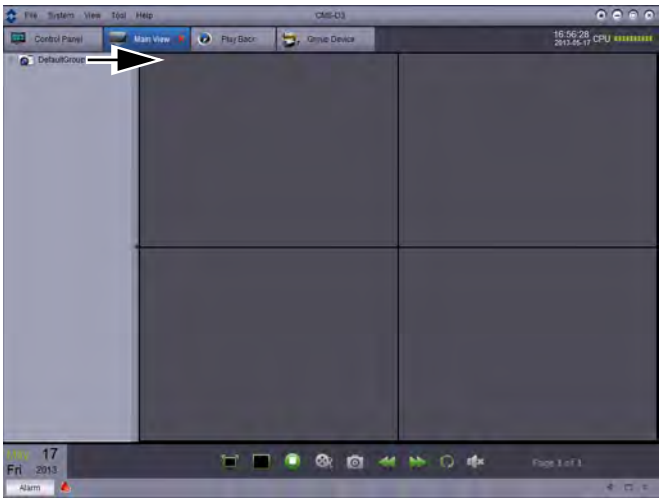
5 Click **ImportAll**. This adds all DVRs and cameras to the Default group.

6 Click the **Control Panel** tab.

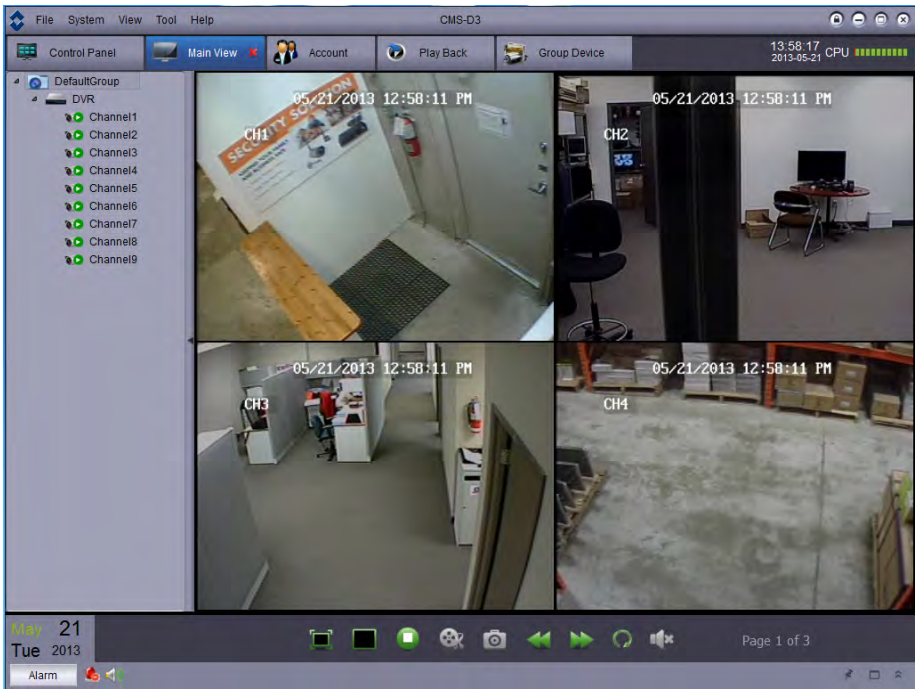
7 Click **Main View**.



8 Click and drag **Default Group** to the display grid.

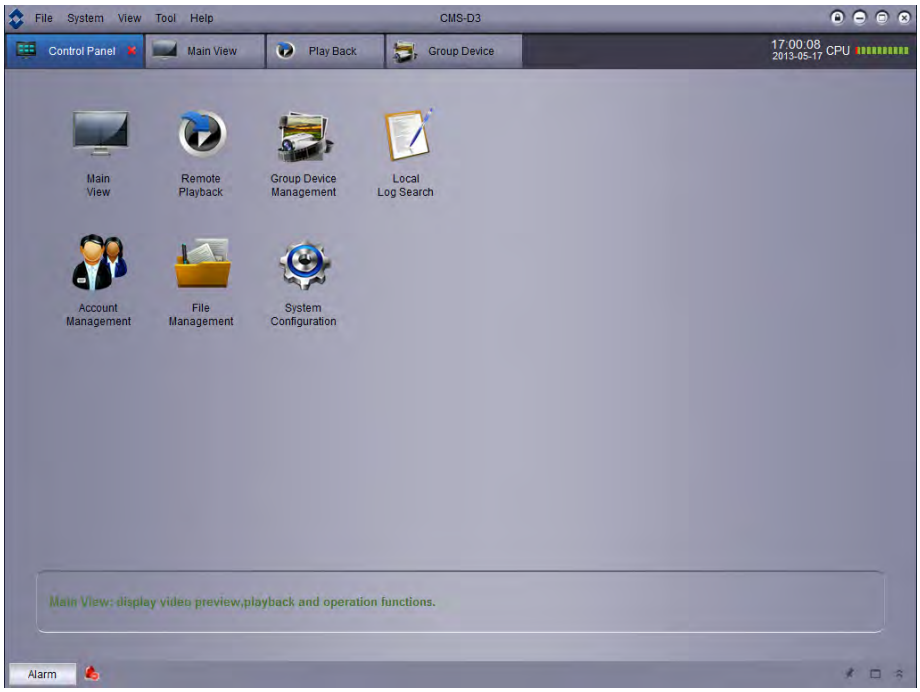


Result



Control Panel

You can access your DVRs, including live and recorded video and configuration through the Control Panel. You may open the Control Panel at any time by clicking the Control Panel tab.



The menus available through the Control Panel are:

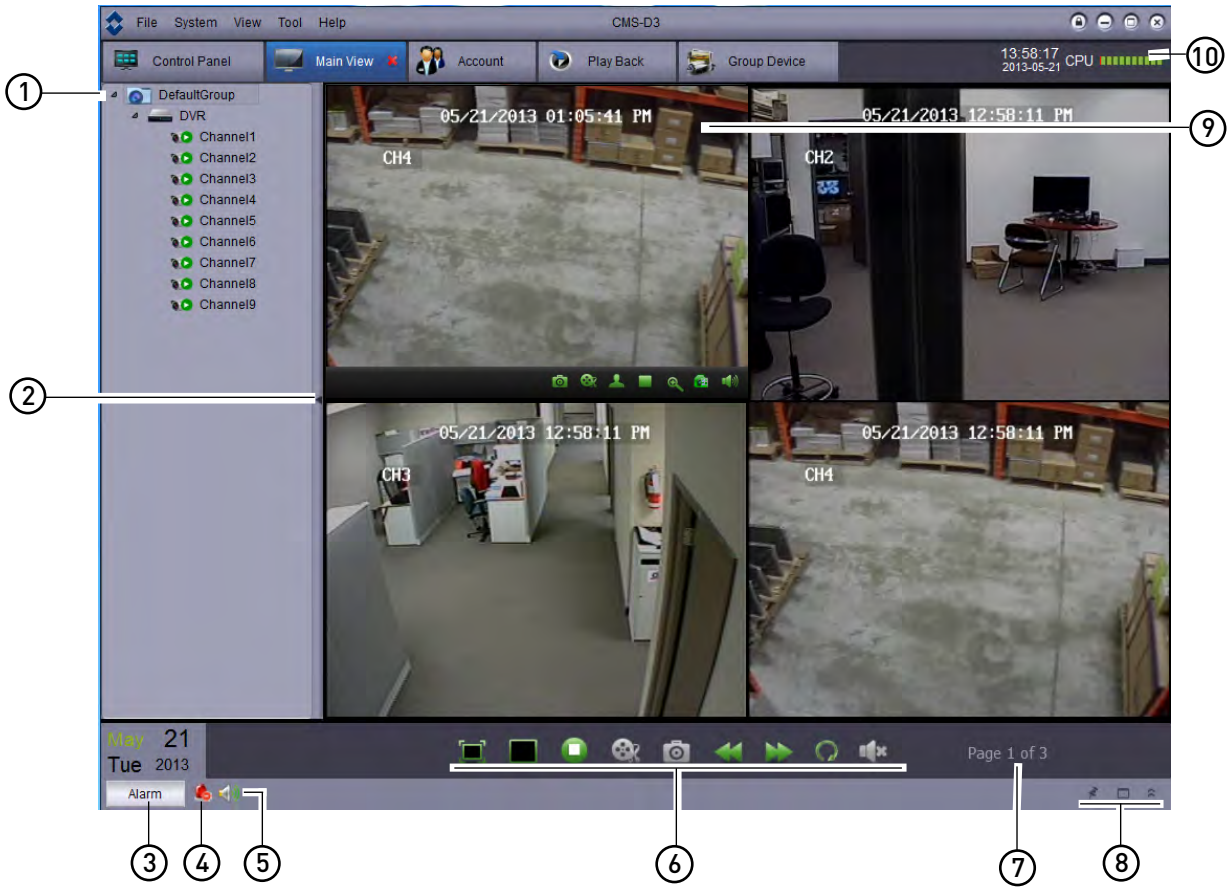
- **Main View:** View live video from your cameras. For details, see "Main View" on page 91.
- **Remote Playback:** Playback recorded video from your DVR. For details, see "Remote Playback" on page 97.
- **Group Device Management:** Manage DVRs and camera groups. Remotely configure DVR settings. For details, see "Group Device Management" on page 100.
- **Local Log Search:** Search for logs on your DVRs. For details, see "Local Log Search" on page 103.
- **Account Management:** Configure user accounts and passwords for the client software. For details, see "Account Management" on page 105.
- **File Management:** View or manage screenshots and recorded video files. For details, see "Remote Playback" on page 97.
- **System Configuration:** Configure CMS-D3 settings. For details, see "System Configuration" on page 110.

Main View

Main View allows you to view live video from your cameras.

To access Main View:

- From the Control Panel, click **Main View (** **)**.



1 **DVR/Camera List:** Shows a list of all DVRs/camera groups and cameras connected to the client software.

- Camera groups are shown with an icon. DVRs are shown with an icon. Double click a DVR or camera group expand the DVRs or cameras in it.
- Cameras are shown with one of the following icons:

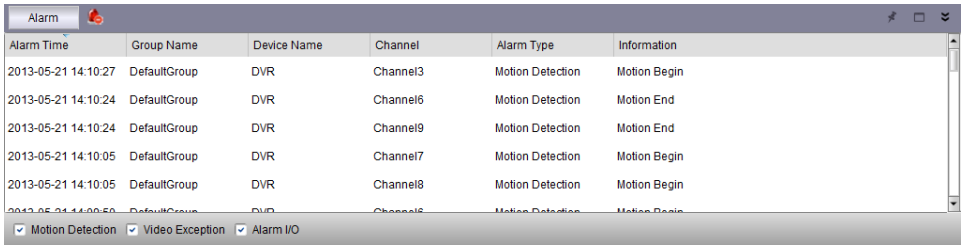
	Camera online, but not selected in live view.
	Camera online and selected in live view.
	Camera is offline (connection issue).

- Click-and-drag cameras, DVRs, or camera groups to the display grid to open them.

TIP: You can click-and-drag cameras from different DVRs to create custom views.

2 **Hide DVR/Camera List:** Click the arrow to hide/show the DVR/Camera List.

3 **Alarm:** Click to show the Alarm Panel. The Alarm Panel shows a list of system alarms and events, such as motion detection events.


Alarm
Alarm Time
Group Name
Device Name
Channel
Alarm Type
Information
2013-05-21 14:10:27 DefaultGroup DVR Channel3 Motion Detection Motion Begin
2013-05-21 14:10:24 DefaultGroup DVR Channel6 Motion Detection Motion End
2013-05-21 14:10:24 DefaultGroup DVR Channel9 Motion Detection Motion End
2013-05-21 14:10:05 DefaultGroup DVR Channel7 Motion Detection Motion Begin
2013-05-21 14:10:05 DefaultGroup DVR Channel8 Motion Detection Motion Begin
Motion Detection
Video Exception
Alarm I/O

4 **Clear Alarms** : Click to clear all alarms from the list.

5 **Mute Alarm Sound** : Click to mute/un-mute the audio alarms that are played when events occur. To configure the alarm sounds that are played, see "Alarm Sound" on page 111.

6 **Main View Toolbar:**

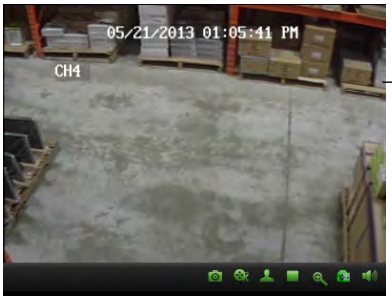
- **Full-Screen** : Click to open the display grid in full-screen. Press **ESC** to exit full-screen.
- **Select Layout** : Click to select a display grid layout.
- **Stop Live Display** : Click to stop camera streaming on all channels.
- **Screenshot** : Click to save a screenshot of the currently selected channel.
- **Manual Record** : Click to start/stop manually recording the currently selected channel.
- **Previous/Next** : Click to go to the previous or next camera or page.
- **Sequence** : Click to configure Sequence mode.
- **Volume** : Click to control volume.

7 **Page** Page 1 of 3 **:** When more cameras are opened than windows on the display grid, they are organized into pages. The current page and total number of pages is shown at the bottom of the Main View tab.

8 **Alarm Panel Controls:**

- **Auto-hide:** Click to enable/disable alarm panel auto-hide.
- **Maximize Alarm Panel:** Click to open the Alarm Panel in its own tab.
- **Show/hide Alarm Panel**

9 **Camera Display:** Click to select a channel. Hold the mouse over the channel to access the Camera Toolbar. The camera toolbar contains the following options:



Hold the mouse over a channel to open the camera toolbar

- **Manual Record** **:** Click to start/stop manual recording of the currently selected camera.
- **Screenshot** **:** Click to take a screenshot from the currently selected camera.
- **PTZ** **:** Click to access PTZ controls. For details, see "Using PTZ Controls" on page 95.
- **Stop Live Display** **:** Click to stop streaming the selected camera.
- **Digital Zoom** **:** Click to enable digital zoom mode. The cursor will change to a icon. Then, click and drag on the camera picture to zoom in. Click again to zoom out.
- **Color Settings** **:** Open the Color Settings menu for the selected camera.
- **Mute audio** **:** Click to mute / un-mute audio from the selected camera. Audio-enabled cameras required (not included).

10 **CPU Status:** Shows the level of CPU use on your computer.

Using Multiple Windows or Monitors

You can create additional CMS-D3 windows. These windows can be used to monitor cameras on secondary monitors.

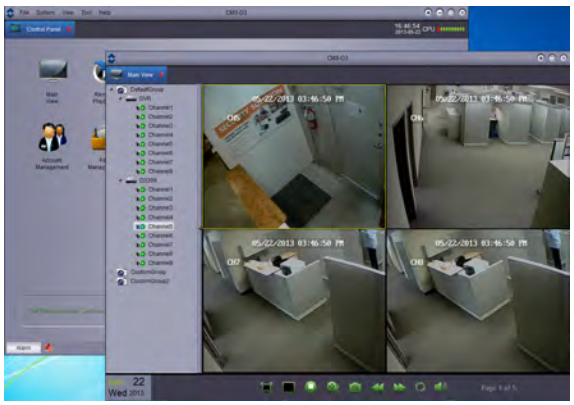
NOTE: Using secondary monitors increases the amount of required computing power. If you would like to use this feature, it is recommended to have a computer that exceeds the specifications listed in "System Requirements" on page 83.

To open multiple windows:

- Click an open tab and drag it outside of the main window. A secondary window opens with the selected tab. You may now move that window to a secondary monitor.

Click and drag the tab outside of the window

R



TIP:
To open additional Live View tabs, click Control Panel, then Live View. This allows you to monitor different cameras across multiple monitors.

Using Sequence Mode

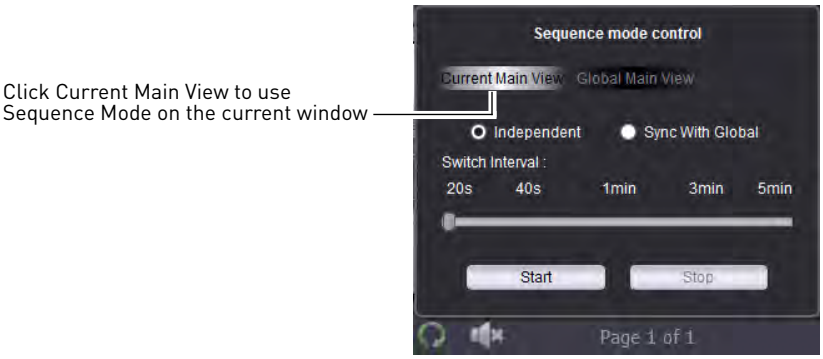
When Sequence Mode is activated, Main View will automatically cycle through pages every few seconds. You can set Sequence Mode on one or all CMS-D3 windows.

To use Sequence Mode:

1 Click to open Sequence Mode controls.

2 If you want to use Sequence Mode only on the current window, click **Current Main View**. Then, select **Independent** for the current window to use a custom switch interval (dwell time) or

Sync with Global for the current window to use the same interval as other windows.



OR

If you want to use Sequence Mode on all windows, click **Global Main View**. Enable the checkbox to force all Main View windows to use the same interval as other windows.

3 Use the slider to set the **Switch Interval** (dwell time).

4 Click **Start** to start Sequence Mode.

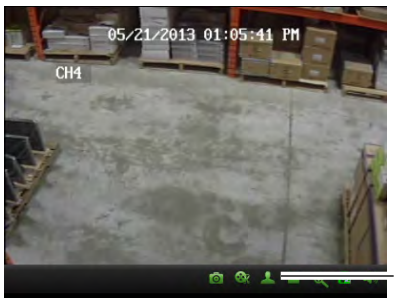
Using PTZ Controls

If you have a PTZ camera, you can control it remotely through the software.

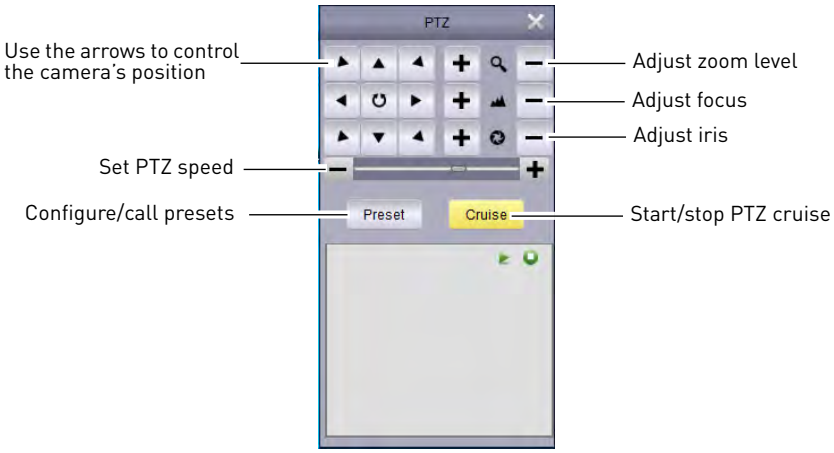
NOTE: You must connect the PTZ camera to the DVR and configure PTZ settings locally before you can use PTZ controls. See the manual for your system for details.

To control PTZ cameras:

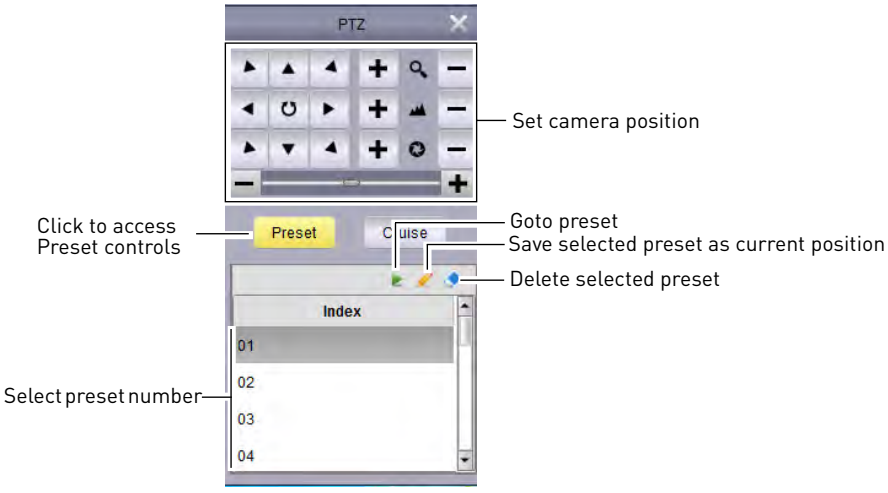
1 In Main View, hold the mouse over the PTZ camera to open the Camera Toolbar. Click to open PTZ controls.



PTZ Controls



Using PTZ Presets



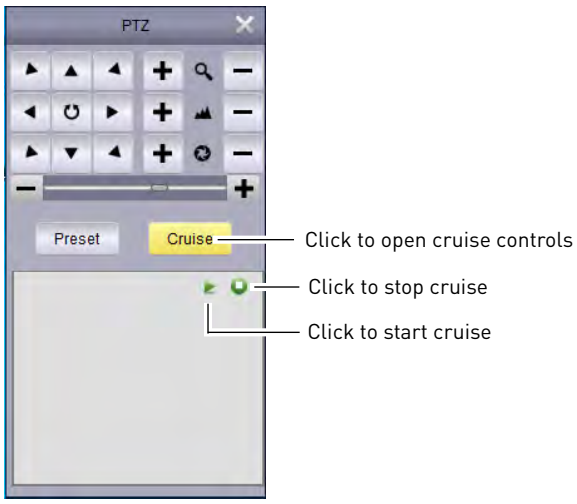
Using PTZ Cruise

When PTZ cruise is enabled, the camera will cycle through saved presets. You must save presets to use PTZ cruise.

To start / stop PTZ cruise:

1 Click **Cruise**.

2 Click to start the PTZ cruise. Click to stop the PTZ cruise.

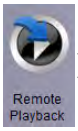


Remote Playback

Remote Playback allows you to view recorded video from your DVR on your computer.

To access Remote Playback:

1 From Control Panel, click Remote Playback ( ).



2 Double-click the camera group then the DVR you would like to playback from.

3 Check up to four channels you would like to playback.

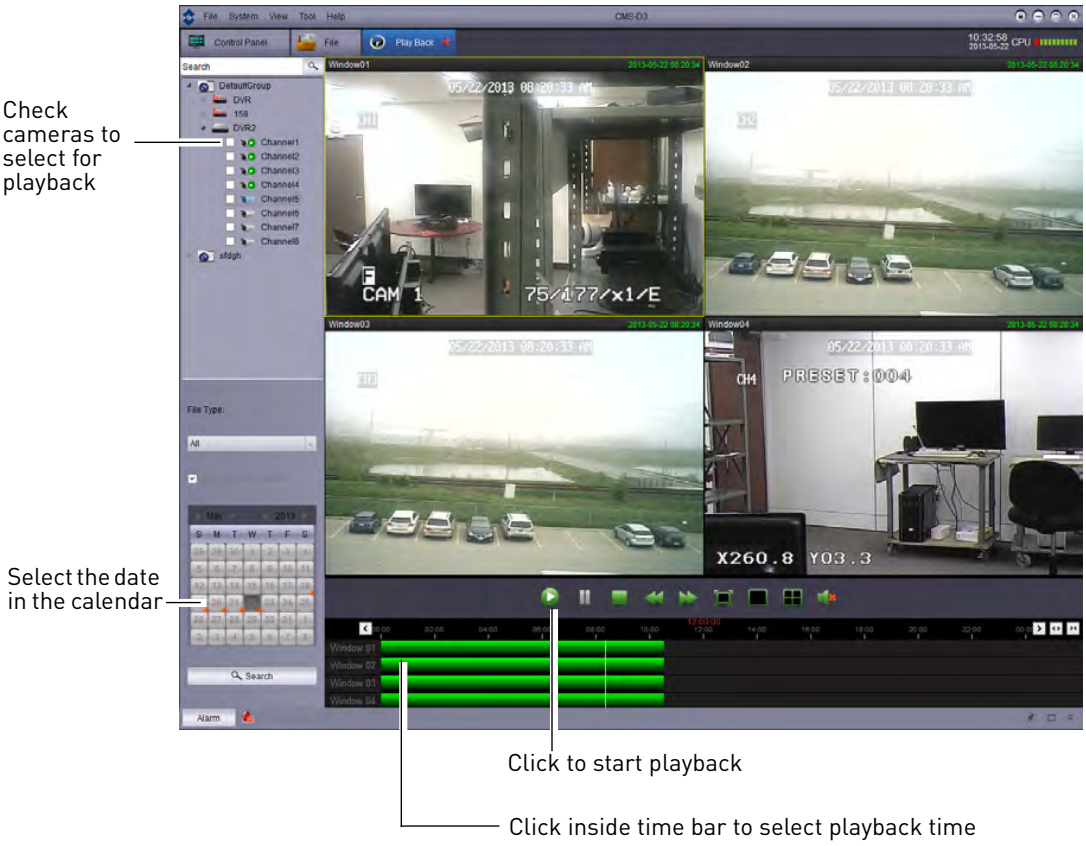
- **Optional:** Check **Synchronous Playback** to playback video from multiple channels at the same time. If this is unchecked, you can select different playback times on each camera.

4 In the calendar, select the day you would like to playback. A red triangle is shown on days that have recorded video available for the selected channel(s).

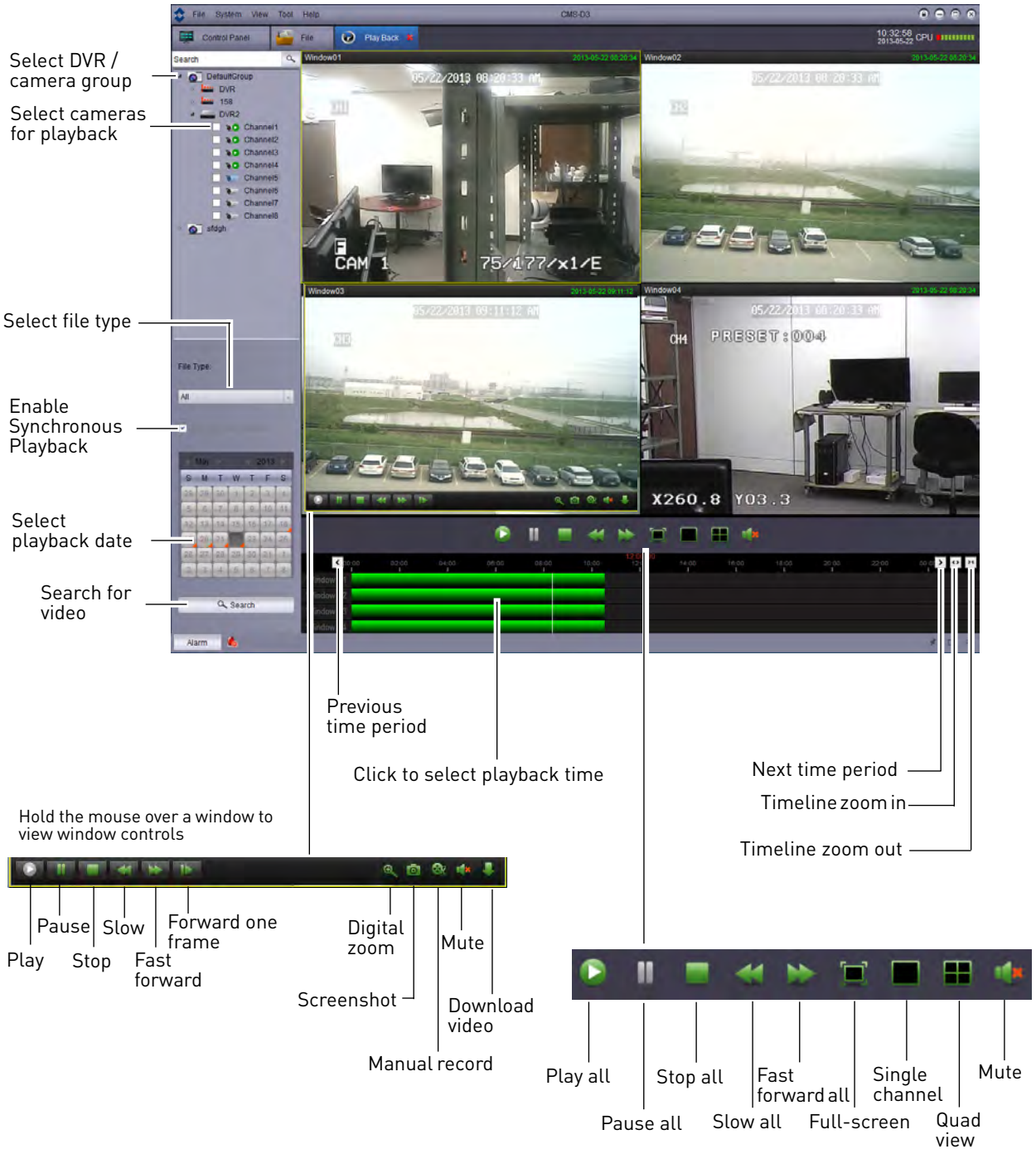
5 Click **Search**. The time bar shows video recorded on your DVR.

6 Click to start playback at the selected time.

7 Click inside the time bar to select the playback time.


Check cameras to select for playback
Select the date in the calendar
Click to start playback
Click inside time bar to select playback time

Remote Playback Controls



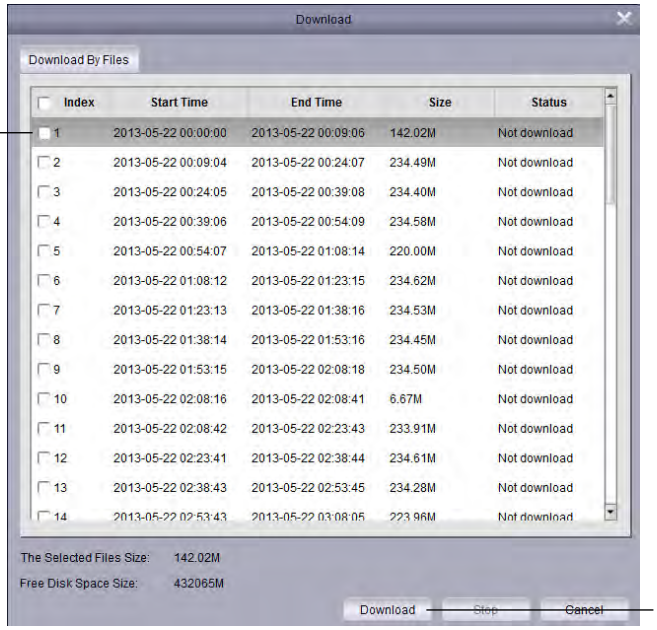
Downloading Video Files

You can download video files to your computer using Remote Playback.

To download video files by file:

1 Hold the mouse over the camera you would like to download video from. Click to open the download menu.

2 Check the files you would like to download and click **Download**. Wait for the files to download.



Video files are saved in .264 format. To open downloaded video files in CMS-D3, see "Video Player" on page 108. If you want to covert video files to .avi, download the AVI converter from www.flirsecurity.com/pro.

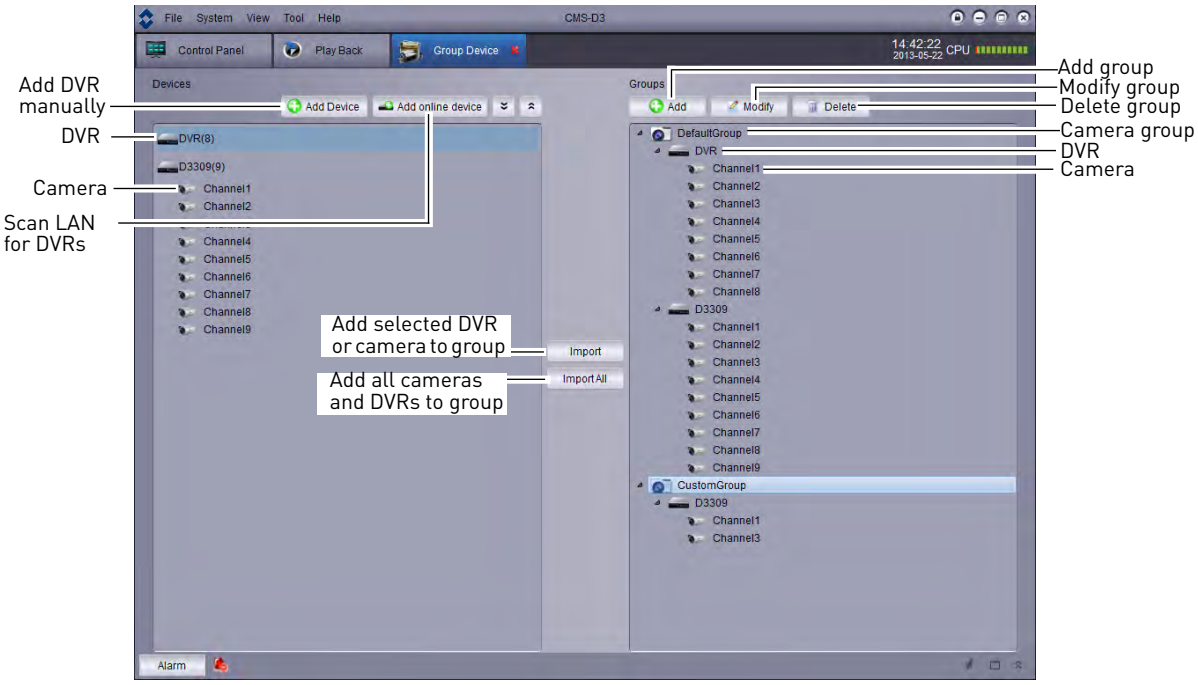
Group Device Management

The Group Device Management menu is used to manage DVRs and camera groups. It is divided into the Device Panel and the Group Panel.

The Device Panel (left side) allows you to add, modify, or delete DVR systems. It is also used to remotely configure DVR settings.

You can use the Group Panel (right side) to set up camera groups. Camera groups organize

DVRs and cameras together to simplify the management of multiple systems. You must add a camera to a camera group before you will be able to access it for live video or playback. You can add multiple DVRs or cameras from different DVRs to a camera group. The DefaultGroup is created by default, and you can create additional groups according to your needs.

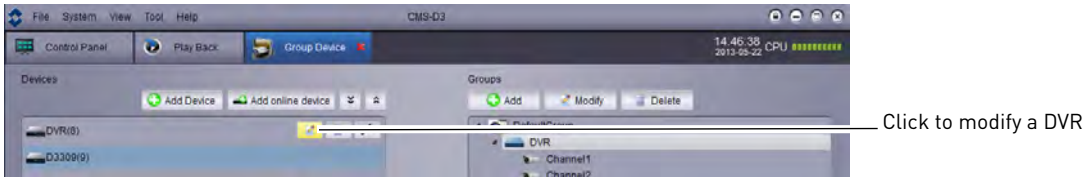


Modifying DVRs

You can modify the name or connection information of DVRs in the Devices Panel.

To modify a DVR:

1 Hold the mouse over the DVR in the Devices Panel and then click .



2 Modify the DVR's information and click **Modify**.

Deleting DVRs

You can delete DVRs from CMS-D3.

To delete a DVR:

- Hold the mouse over the DVR in the Devices Panel and then click . Click **Yes** to confirm.

Remotely Configuring DVRs

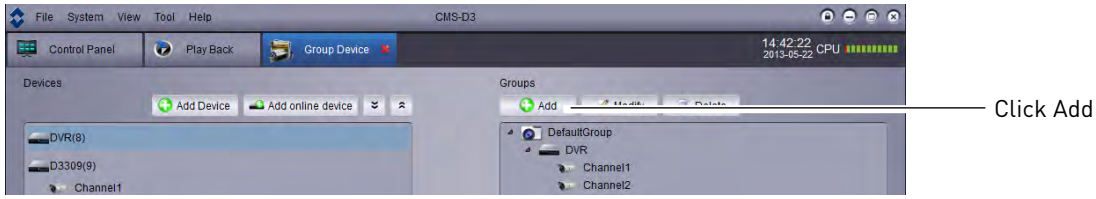
You can configure DVR settings using the software.

To remotely configure a DVR:

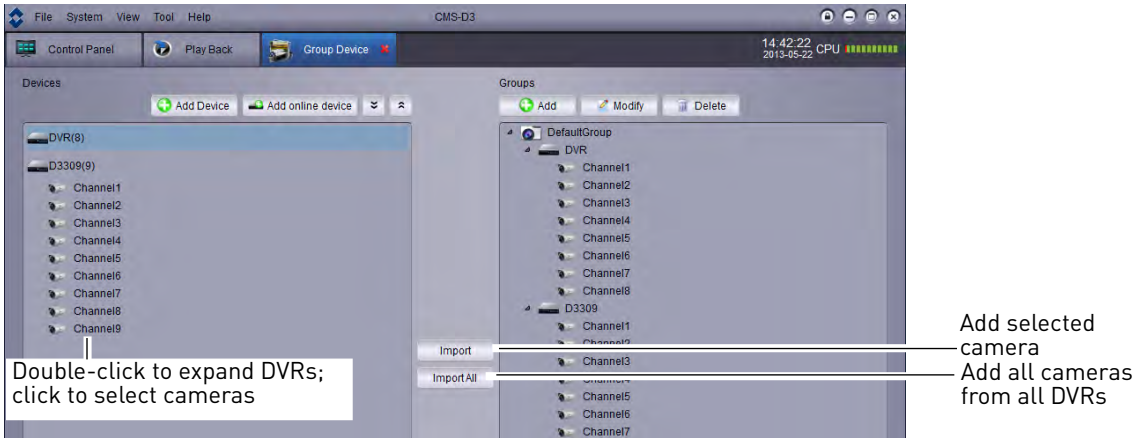
- Hold the mouse over the DVR in the Devices panel and click . See the Instruction Manual for your DVR for details on available settings.

Creating Camera Groups

1 Under Group, click **Add**. Enter a name for your group and click **Yes**.



2 To add cameras to your camera group, double click DVRs on the left side to see the cameras connected to them. Then, click the cameras you would like to add and click **Import**. Or, click **ImportAll** to add all cameras from all DVRs.

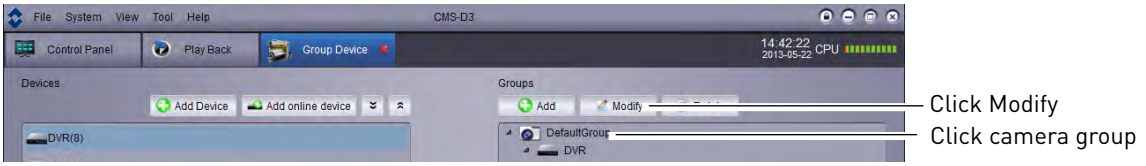


Modifying Camera Groups

You can change the name of a camera group or delete cameras or DVRs from the camera group. Deleting cameras or DVRs from a group does not remove them from CMS-D3.

To modify a camera group:

1 Click the camera group then click **Modify**.

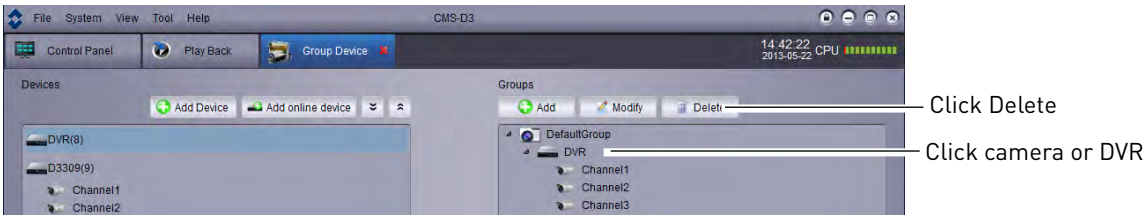


2 Enter a new name for the camera group and then click **Yes**.

To remove DVRs or cameras from a camera group:

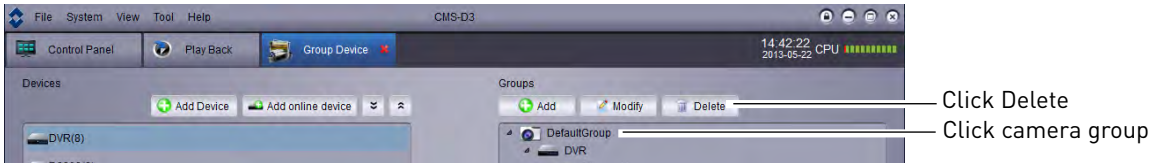
1 Click the DVR or camera to select it. Double click camera groups or DVRs to expand.

2 Click **Delete** and then click **Yes** to confirm.



Deleting Camera Groups

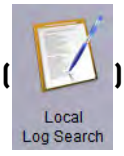
- Click the camera group you would like to delete and click **Delete**. Click **Yes**.



Local Log Search

The Local Log Search allows you to search CMS-D3 logs. By default, CMS-D3 retains logs for up to one week. You may set the log retaining time up to one month (for details, see "System Configuration" on page 110).

To search for logs:

1 From the Control Panel, click **Local Log Search (** 

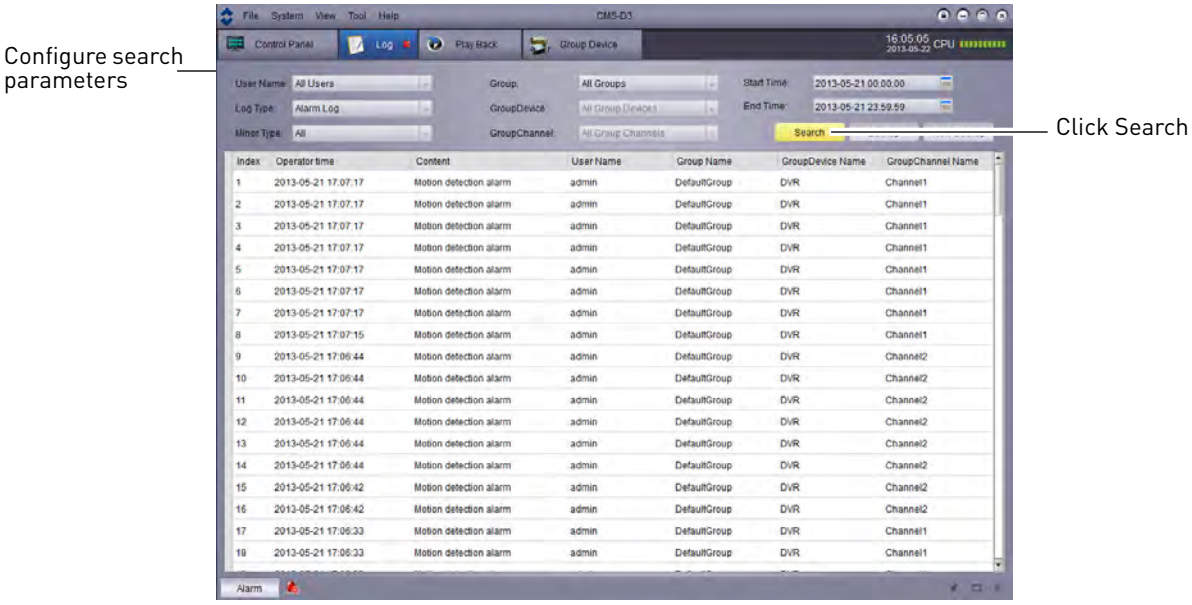
).

2 Configure the following search options:

- **User Name:** Select **All Users** to search for logs generated by all users or select a specific user to see logs generated by that user.

- **Log Type:** Select **Alarm** for motion detection alarms and system warning logs, **Operation** for operations logs, such as configuration changes, or **System** for logs of user access to the system (e.g. log-ins and log-outs).
- **Minor Type:** Select **All** to search for all logs in the Log Type you have selected or select a specific type of log to search for.
- **Group:** Select the DVR or camera group you would like to search for logs on or select **All Groups** to search for logs from all DVRs and camera groups.
- **Start Time/End Time:** Select the start and end time for your search.

3 Click **Search**. All logs that meet your search parameters appear in the list.



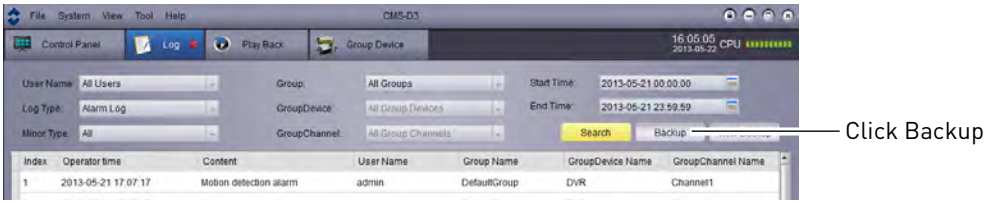
Backing up Logs

You can backup log search results to your computer hard drive or open saved log files in CMS-D3.

To back up logs:

1 Perform a search using the steps above.

2 Click **Backup**.



3 Select a folder and enter a file name. Click **Save**.

To open saved log files:

1 Click **View Backup**.

2 Select a log file and click **Open**.

Account Management

The Account Management menu allows you to create user accounts for CMS-D3.

The client software has the following types of user accounts:

- **Admin:** The admin account is logged in by default when you first run the client software. This is a unique account that has full control over all software and DVR functions. The admin may add, modify, or delete any user account.
- **User:** This is a standard user account. User accounts have only the permissions they are given by the admin and cannot change software settings or change other user accounts. Users may change their own password.

To access Account Management:

- From the Control Panel, click **Account Management (**

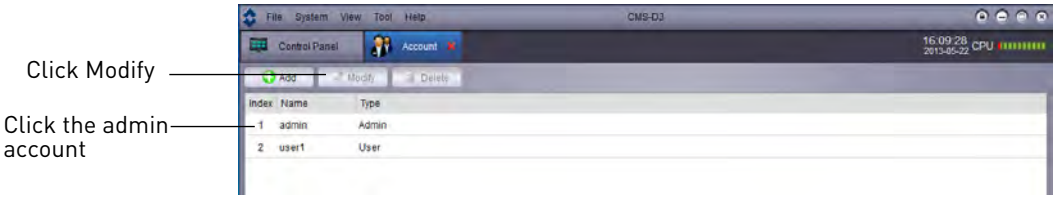
).

Enabling Passwords for the Admin Account

By default, the password for the admin account is blank, and a password is not required to access CMS-D3. Creating a custom password for the admin account will make it so passwords are required to access the software.

To create a password for the admin account:

1 While logged in as the admin account, click the **admin** account in the list and then click **Modify**.



2 Enter a **Password** for the admin account. Repeat the password under **Confirm**.

3 Click **Save** to save the password.

NOTE: Click to lock CMS-D3. You will need to enter the admin password to continue using CMS-D3. Or, click **System→Switch User** to login with a different user account. Please note that this does not log out the admin account until another account is logged in.

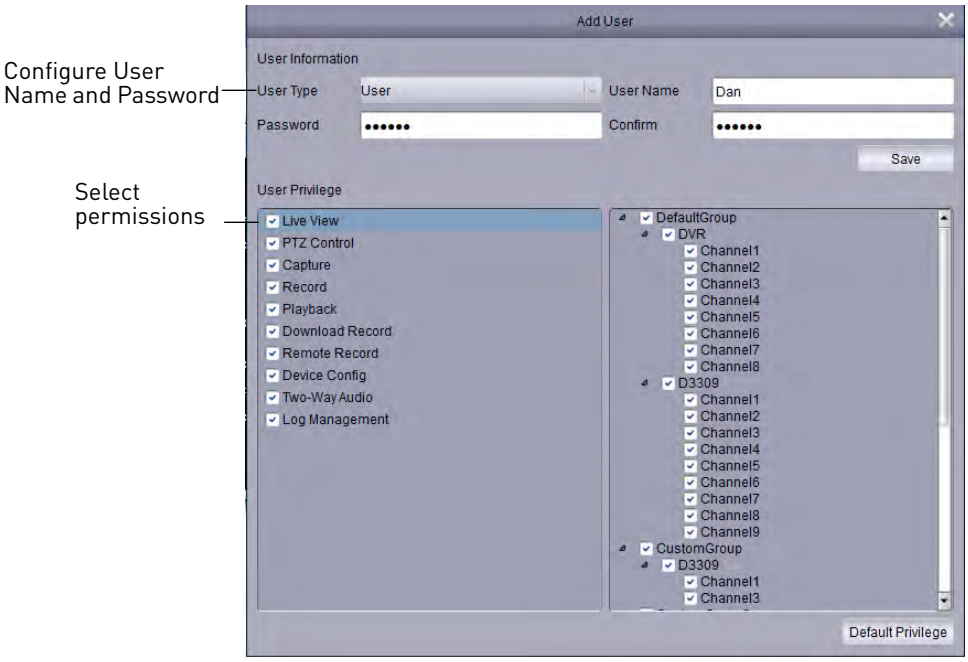
Adding User Accounts

NOTE: Only the admin account may create new user accounts.

1 Click **Add**.

2 Configure the following:

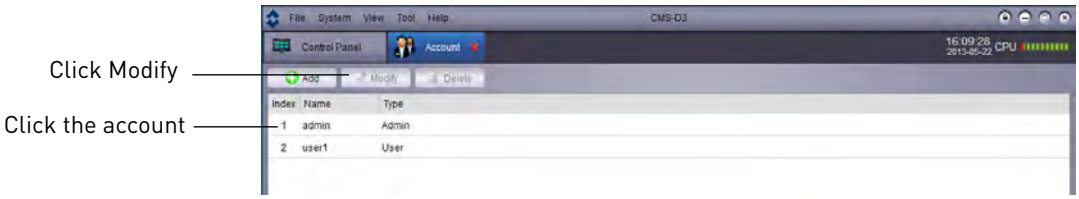
- Under **Password**, enter a password for the user account. Repeat the password under **Confirm**.
- In the bottom area, check the permissions you would like to assign to the user account.



3 Click **Save** to create the user account.

Modifying User Accounts

1 Click the account you would like to modify and then click **Modify**.

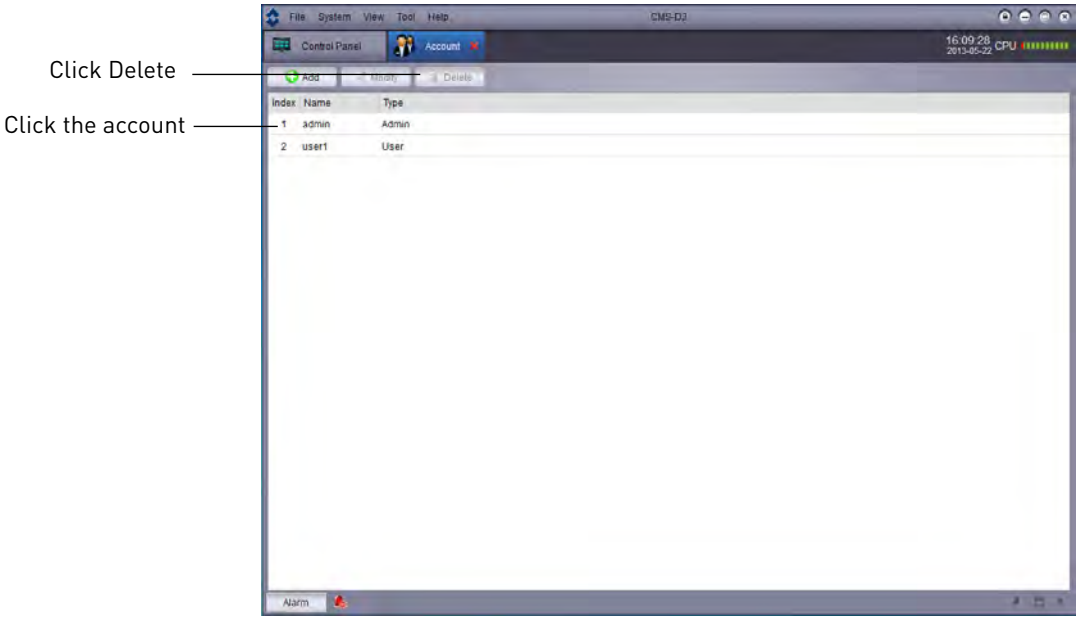


2 Edit the user account settings and permissions as needed and click **Save** when finished.

NOTE: User accounts may only modify their own password. The admin may modify passwords or permissions for any user account. You cannot change the User Name of an account.

Deleting User Accounts

• Click the account you would like to delete and then click **Delete**. Click **Yes** to confirm.



NOTE: Only the admin account may delete user accounts.

Using File Management

Use File Management to access manual recordings and screenshots.

To use File Management:

1 From Control Panel, click **File Management (** **)**.

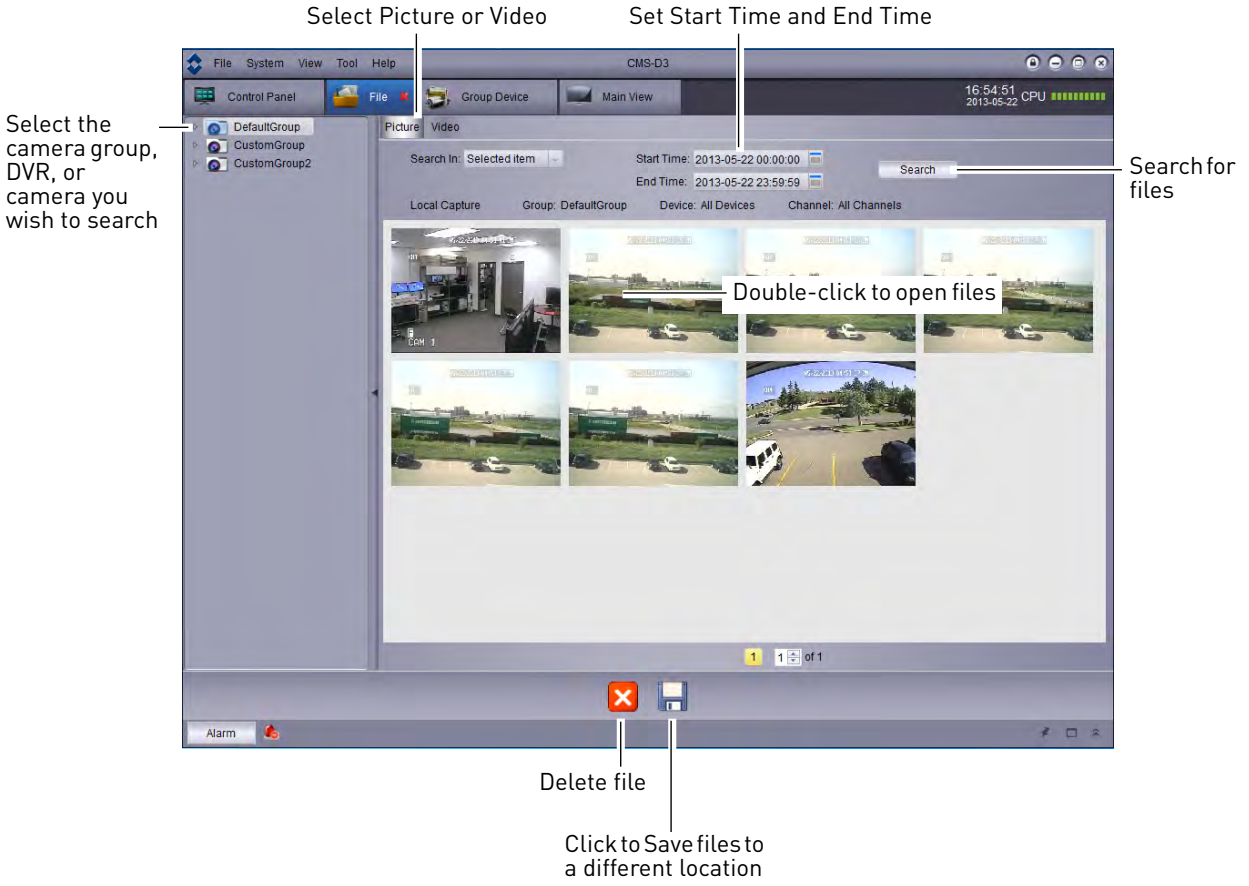
2 On the left side of the screen, click the camera group, DVR, or camera you wish to search.

3 Click the **Videos** tab to search for manual video recordings or click the **Pictures** tab to search for screenshots.

4 Set the **Start Time** and **End Time** for your search. The timestamps on manual recordings and screenshots are based on the timestamps on the original video recordings, not when the files were saved.

5 Click **Search** to search for files.

6 Double-click to open files or use the controls on the bottom of the screen to delete or save files to a different location on your computer.



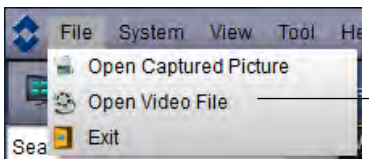
NOTE: Picture files are saved in .png format. Video files are saved in .264 format. If you want to covert video files to .avi, download the AVI converter from www.flirsecurity.com/pro.

Video Player

The Video Player allows you to open backup video files extracted from the DVR or to play manual recordings or downloaded video files.

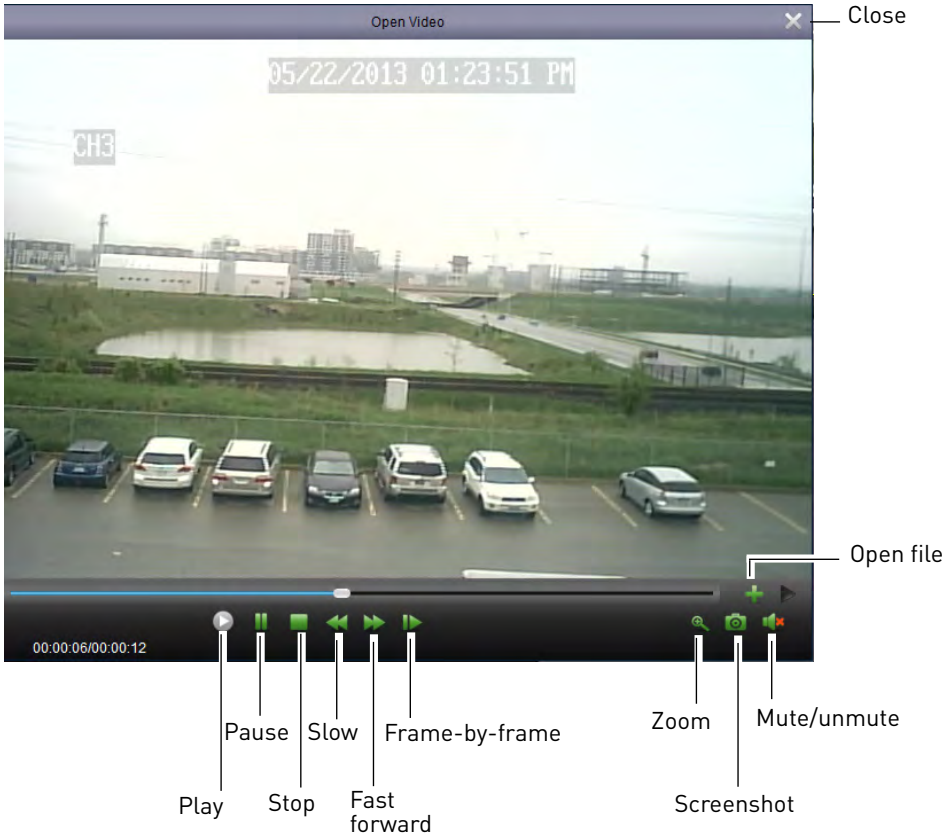
Opening Backup or Downloaded Video Files

1 Click **File→Open Video File**. The Video Player opens.



2 Click . Then select your video file and click **Open**. It will begin playing back in the Video Player.

Video Player Controls



- To zoom in, click and click-and-drag. Click again to zoom out.

System Configuration

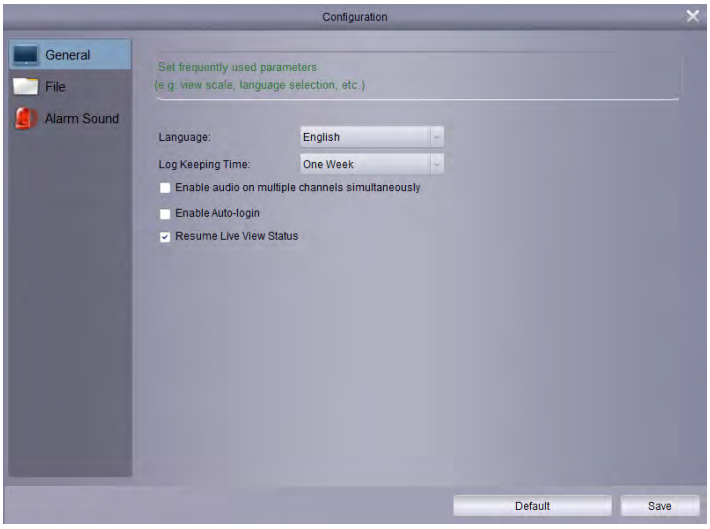
The System Configuration menu allows you to configure settings for CMS-D3.

To access System Configuration:

- From the Control Panel, click **System Configuration (**

).

General



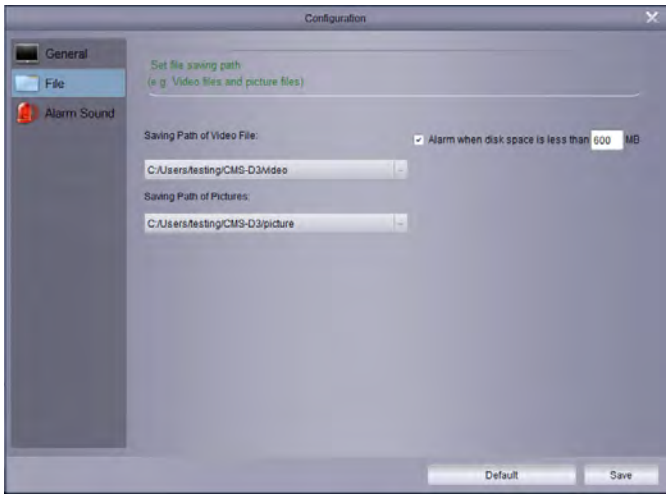
To configure General options:

1 Configure the following:

- **Language:** Select the language.
- **Log Keeping Time:** Select the amount of time the software will retain system logs.
- **Enable audio on multiple channels simultaneously:** Check to allow the software to play audio on multiple channels at the same time.
- **Enable Auto-login:** Check to enable auto-login. If Auto-login is checked, passwords will not be needed to start the software.
- **Resume Live View Status:** Check for the software to restore the last used view configuration after opening.

2 Click **Save** to save changes.

File



The File sub-menu allows you to configure default save folders for screenshots and video files. You can also set up an alarm that activates when the disk space on your computer is low.

To configure save folders:

1 Click and then select the desired folder.

2 Click **Save** to save changes.

To configure alarm when computer disk space is low:

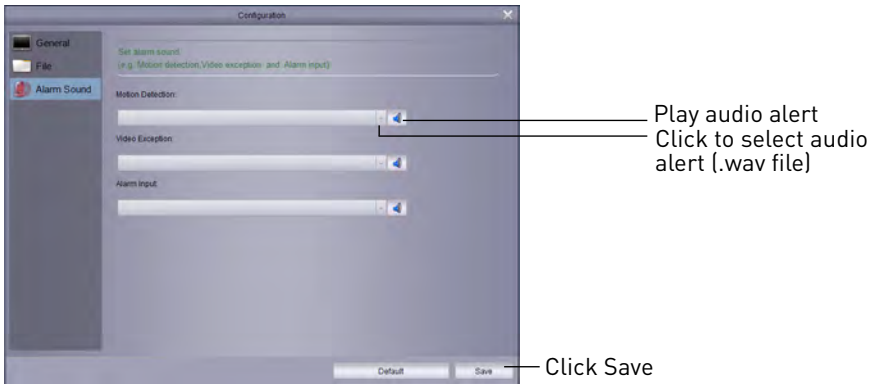
1 Check **Alarm when disk space is less than** to enable an alarm if the disk space on a hard drive containing the one of the save folders is less than the amount specified.

2 Configure the amount of disk space in MB that will trigger the alarm. The lowest you can set is 500MB.

3 Click **Save**.

Alarm Sound

The Alarm Sound menu allows you to configure the audio alerts that will play when events occur. You may use any .wav file as your audio alerts.



FLIR Player: Playing Backed up Video on PC

FLIR Player allows you to view your backed up video files from your DVR on your PC.

NOTE: To view backed up video files on Mac, see "FLIR Mac Player: Viewing Backed up Video on Mac" on page 114.

Minimum System Requirements

- Intel Pentium 4 or above
- Microsoft Windows XP/Vista/7/8
- 256 MB Ram
- 16 MB video memory

Prerequisites

- Back up video files from the DVR to your local hard drive.

Installing FLIR Player

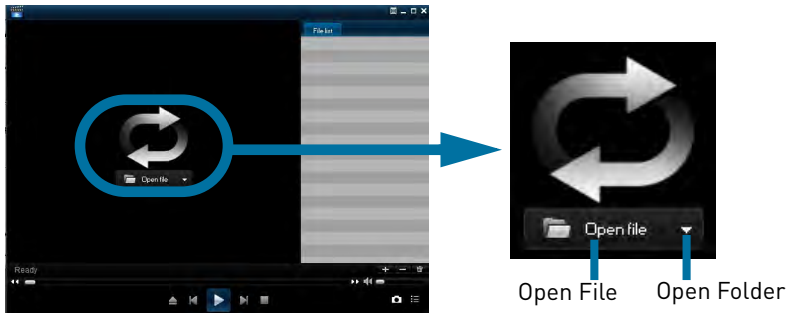
1 Insert the software CD that comes included with the system.
- **OR** download **Video Player for PC** from www.flirsecurity.com/pro, under the page for your DVR model.

2 Click **DVR Software→FLIR Player - PC**. Follow the on-screen instructions to install FLIR Player 1.

Running FLIR Player

1 Double-click the FLIR Player ( ) icon on the desktop.

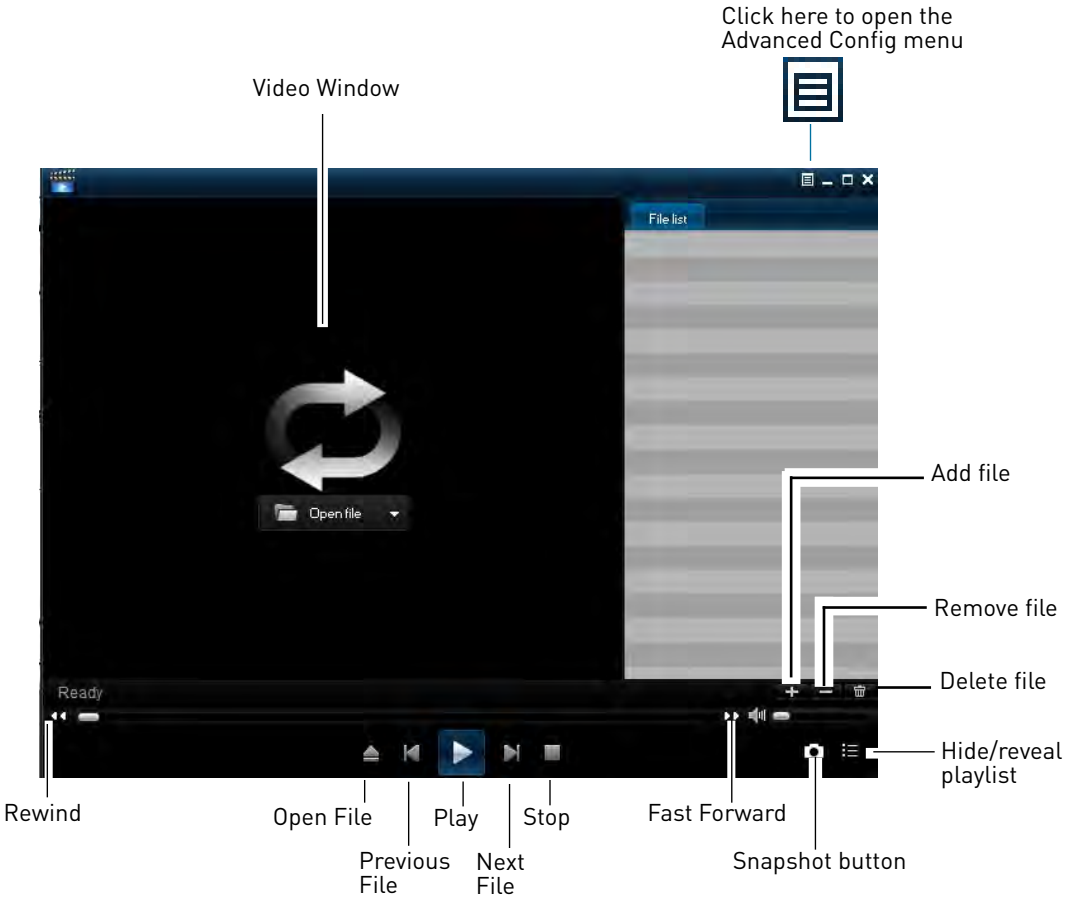
2 Click **Open File** to load a single video file. Click the ▼ button next to it to load a folder with backed-up videos.



3 Select the file and click **Open**.
- If you are opening a folder, click **Add**.

4 Double-click the file in the list on the right to begin playback.

FLIR Player Interface Overview



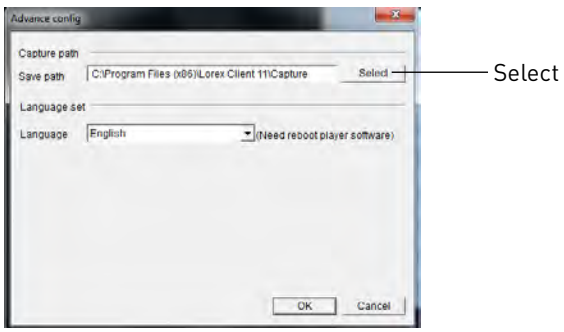
About the Advanced Config menu

The Advanced Config menu allows you to select where the screen captures are stored.

To open the Advanced Config menu:

1 Click the button.

2 Click **Select** to change the snapshot save folder. Then select the folder and click **OK**.



Select

3 Click **OK** to save changes.

FLIR Mac Player: Viewing Backed up Video on Mac

FLIR Mac Player allows you to view your backed up video files.

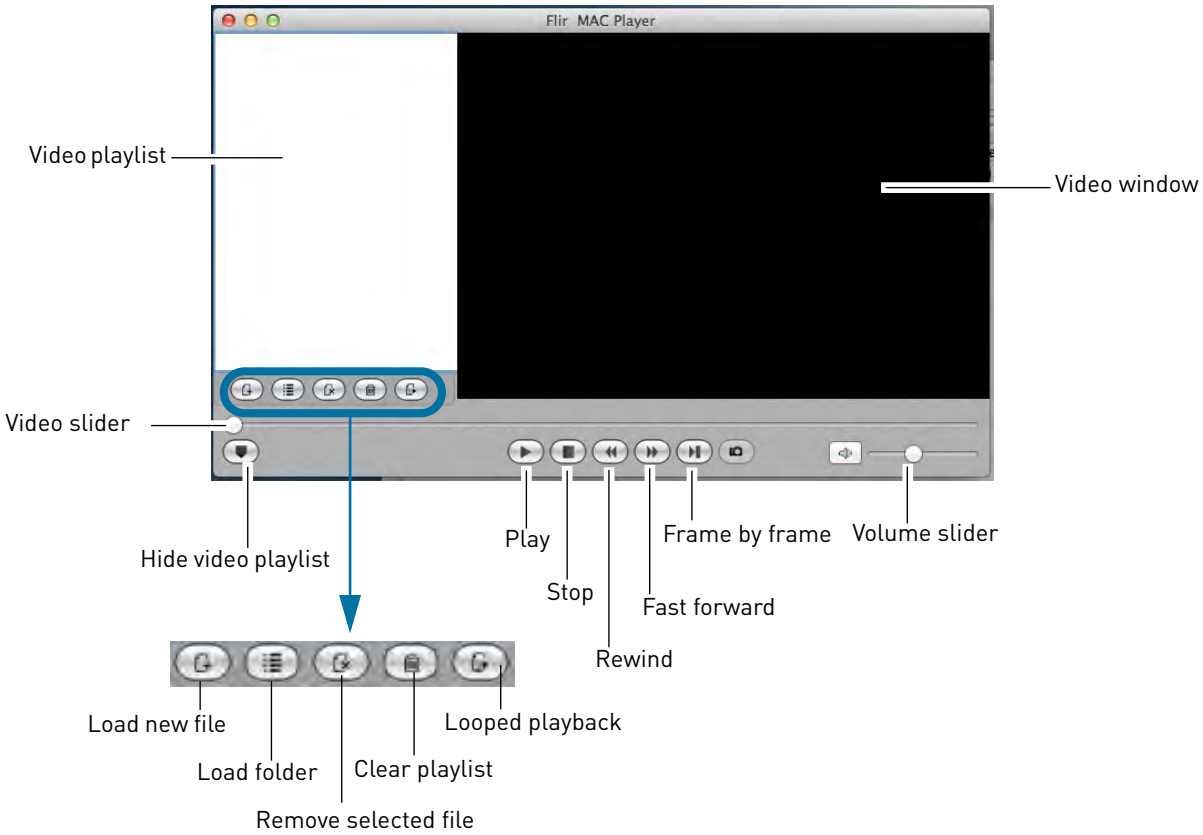
To install FLIR Mac Player:

1. Go to www.flirsecurity.com/pro and search for the model number of your DVR (look at the label underneath your DVR for the model number).
2. Navigate to the product page for your DVR model and download **Video Player for MAC**.
3. Extract the file and double-click the FLIR Mac Player installer (**.pkg**) file. Follow the on-screen instructions to install the software.

Launching FLIR Mac Player:

- Click the FLIR Mac Player icon ( ) in the Dock or in your Applications List in Finder.

FLIR Mac Player Interface



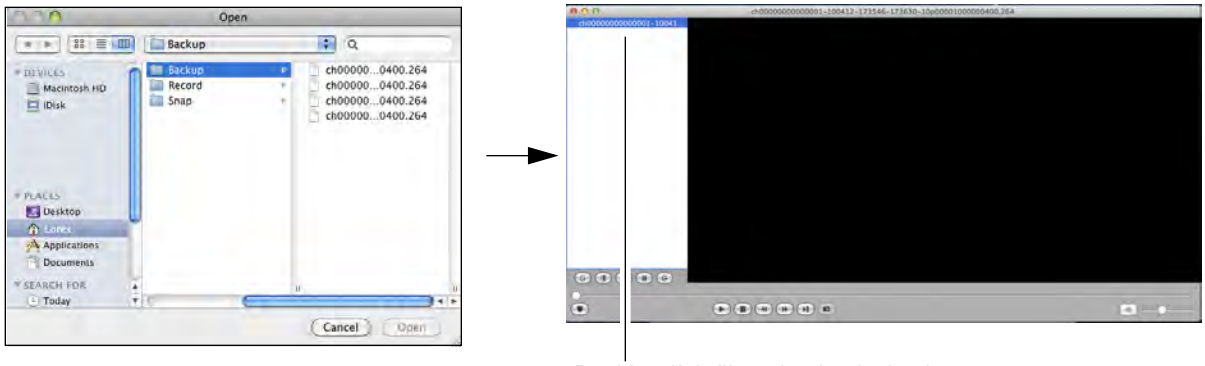
Loading Individual Video Files

To load files saved onto your hard drive:

1 Click the Load new file button ( ).

2 Browse and select the desired file. Click **Open** to add the file to the video playlist.

NOTE: The default save directory is in your Home folder/dvr.



3 Double-click the video file in the playlist to begin playback.

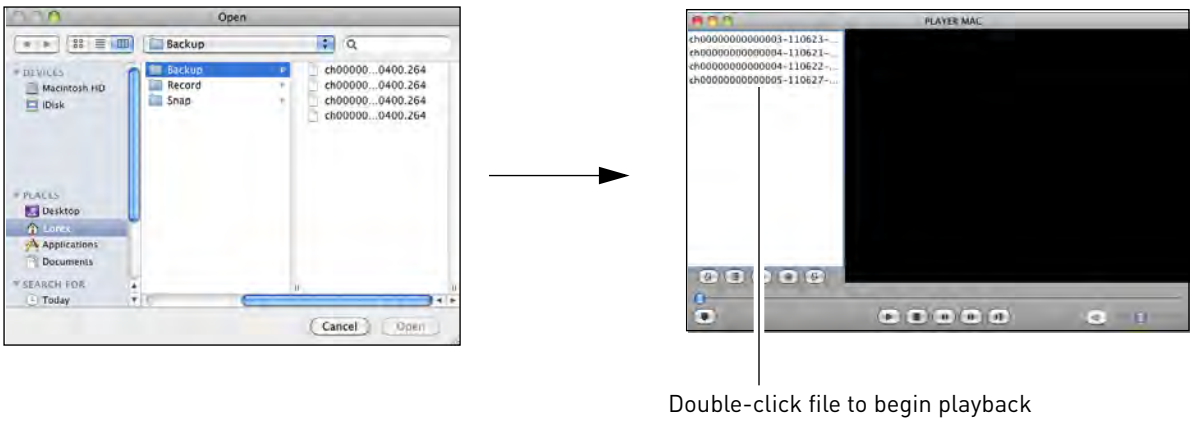
Loading Multiple Video Files

You can load an entire folder of video files.

To load multiple video files saved onto your hard drive:

1 Click the Load folder button ( ).

2 Select the desired folder you wish to add to the playlist. Click **Open** to add all the videos in the folder.



3 Double-click the video file in the playlist to begin playback.

Remote Viewing on Internet Explorer

You can connect to your DVR using Internet Explorer 7 or higher on a PC.

NOTE: On PC, remote viewing is only compatible with Internet Explorer. Mozilla Firefox, Opera, and other browsers are not supported. For Safari connection instructions, see "Setting up your DVR for Remote Connectivity" on page 53.

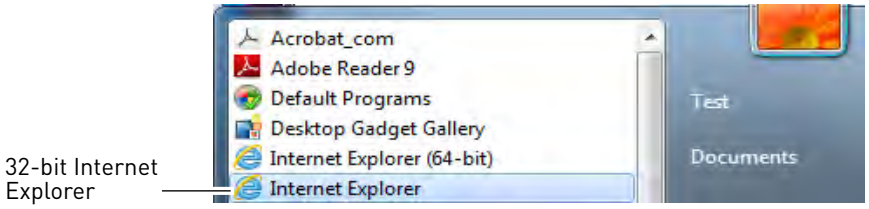
Prerequisites

- The HTTP Port (default: 80) and Client Port (default: 9000) must be port forwarded to your router.
- You must create a DDNS account, and have the DDNS settings configured in your DVR. For details, see "Accessing your DVR Remotely over the Internet" on page 56.
- The DVR must have internet access.

To connect to your system on Internet Explorer:

1 Open Internet Explorer.

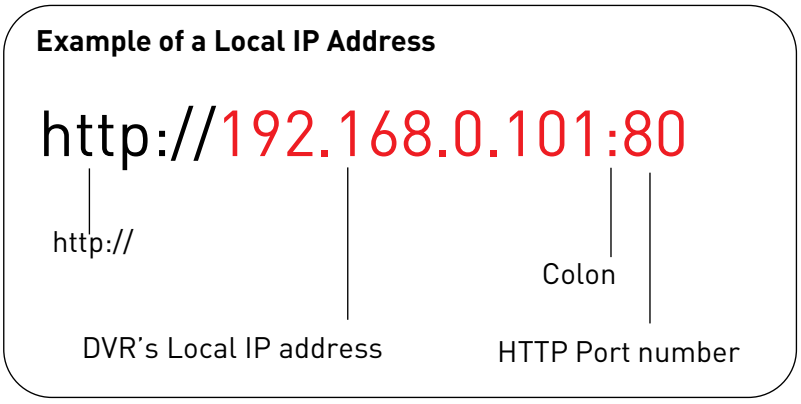
NOTE: If you are connecting using Internet Explorer 9, you must use the 32-bit version. From the Start Menu, click **Internet Explorer**. Do not click Internet Explorer (64-bit).



NOTE: It is recommended to select **Run as administrator** when you open Internet Explorer to ensure full functionality.

2 Enter the IP Address or DDNS address of the DVR in the address bar:

- **IP Address:** Enter **http://**, the **IP address of the DVR**, **colon**, and the **HTTP port number of the DVR** (e.g. http://192.168.5.118**:**80) into the address bar. You must include the HTTP port number of the DVR after the address. You can obtain the local IP address off the DVR by pressing the ↵ button on the front panel.



- **DDNS Address:** The DDNS address must include **http://** , the name of your DDNS URL, followed by **.myddns-flir.com**, **a colon**, and then the **HTTP port number of your DVR**.

Example of a DDNS address

http://tomsmith.myddns-flir.com:80

http://

DDNS Domain name created by you

.myddns-flir.com

Colon

HTTP Port number

3 An attention bar prompts you to install ActiveX® plug-ins. You must install the ActiveX® plug-in to connect to your DVR. Click inside the attention bar, and select **Install this Add-on for All Users on This Computer** to install the plug-in.

Click inside the attention bar

Select Install this Add-on for All Users on This Computer

- If you are connecting using Internet Explorer 9 or 10, the attention bar appears on the bottom of the screen. Click **Allow** to install the plug-in.

Attention Bar in Internet Explorer 9

Click Allow

4 Under **User Name** and **Password**, enter the DVR's username and password. By default, the username is **admin** and the password is **000000**.

5 Click **Login** to log into the system. You will be prompted to change the password for your system.

6 Enter a new 6 character password and click **OK**.

7 Enter the new password under **Password** and click **Login**. Internet Explorer connects to your DVR and streams live video from your cameras.

NOTE: Once logged in, the system interface is identical to the one used in the Client Software. For details, see "Remote Viewing Interface" on page 60.

Mobile Apps: Accessing your DVR Using a Mobile Device

You can remotely view camera streams from your DVR on compatible mobile phones and tablets.

NOTE: Port forwarding is required before you can connect to your DVR using a mobile device. Different features are available on each mobile viewing device and application.

Compatible Devices and Platforms

Platform	Supported Versions and Devices	App Name	Get App From
iOS	iOS v. 5.0 and higher iPhone/iPod Touch iPad (1st generation and above)	Digi Summit (iPhone) Digi SummitHD (iPad)	Apple App Store
Android	Android v. 2.3 and above	Digi Summit	Google Play Store

For the latest device compatibility list, visit www.flirsecurity.com/pro

Before you Begin

You will need the following before you can start viewing on your mobile device:

- **Your DVR's DDNS address:**
  Before you can connect with a mobile device, you must complete the setup process for remote viewing to obtain your DDNS address and enable DDNS on your DVR. Complete all the steps under "Setting up your DVR for Remote Connectivity" on page 53.
- **The Client Port Number of your DVR:**
  The Client Port (default: **9000**) must be port forwarded before you can connect using a mobile device. To find your Client port, press **PTZ /** ↵ on the front panel of the DVR to open the System Information window and look under Client Port.

iPhone

Use the **Digi Summit** application to connect to your DVR on the iPhone.

System requirements

- iOS version 5.0 and above.

NOTE: For the latest device compatibility list, visit www.flirsecurity.com/pro

Prerequisites

- Ports **80** and **9000** (or whichever ports your system is using) must be port forwarded to your router.
- You must create a DDNS account, and have the DDNS settings configured in your DVR.
- The DVR must have Internet access.
- You must have a DDNS address to log in remotely.
- An iTunes account.

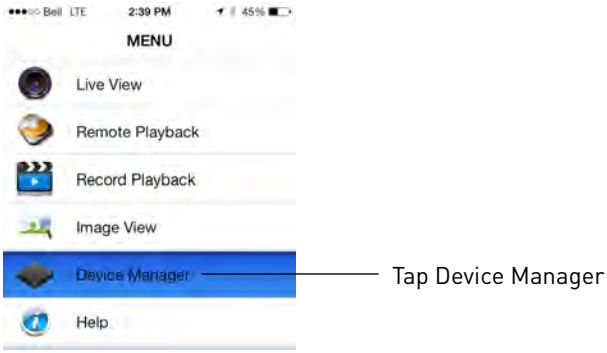
NOTE: You will need to create an iTunes account before you can download the app. An iTunes store account requires a valid credit card number. The app is free of charge.

Connecting to your System Using Digi Summit

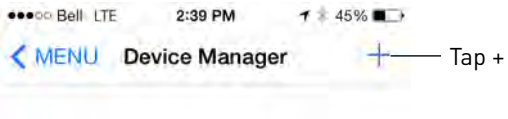
1 Install the **Digi Summit** app for free from the App Store.

2 Tap the Digi Summit icon ( ) to open the app.

3 Tap **Device Manager**.



4 Tap **+**.

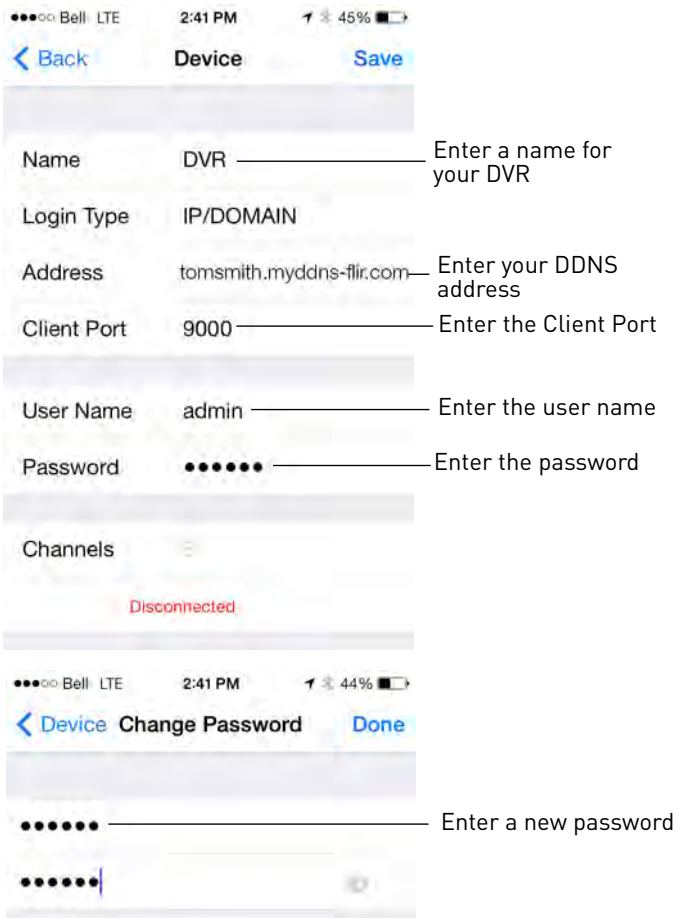


5 Configure the following:

- **Name:** Enter a name for your DVR of your choice.
- **Address:** Enter your **DDNS address** (e.g. tomsmith.myddns-flir.com).
- **Client Port:** Enter the **Client Port** (default: **9000**).
- **User Name:** Enter the **DVR's user name** (default: **admin**).
- **Password:** By default the password is **000000**.

6 Tap **Save**. The app opens in Live View and streams video from all connected cameras.

NOTE: If this is the first time connecting, you will be prompted to change the DVR password. Enter a new 6 character password and tap **Done**. Then, tap **Save** again to connect to your cameras.



Digi Summit Interface

Taking Screenshots

1 Tap during live view or playback.

- If taking screenshots from live view: select the grid area you would like to take a screenshot from or tap to take a screenshot from all connected cameras.

2 To view screenshots, see "Viewing Screenshots" on page 125.

Taking Manual Recordings

1 Tap during live view or playback.

- If taking manual recordings from live view: tap the grid area you would like to start recording on. Tap again when you would like to stop recording.
- If taking manual recordings from playback: tap when you would like to stop recording.

2 To view manual recordings, see "Viewing Manual Recordings" on page 125.

Using PTZ Controls

If you have a PTZ camera (not included) connected, you may control it using Digi Summit.

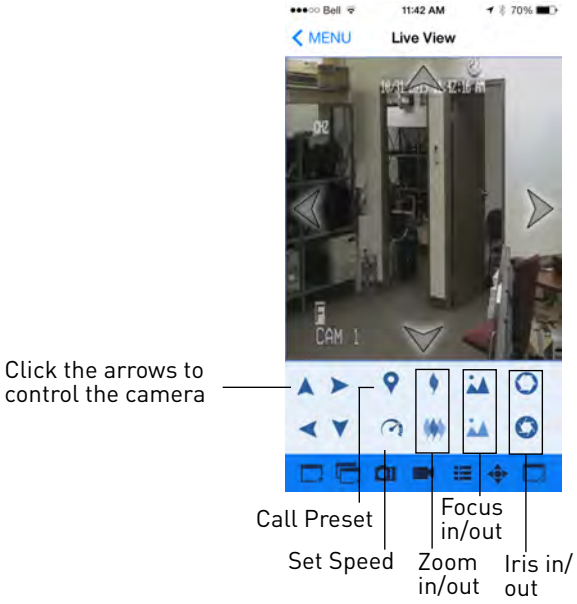
NOTE: You must configure the system to communicate with the PTZ camera locally before you can control it using the app. For details, see "Appendix B: Connecting a PTZ Camera" on page 147.

To use PTZ Controls:

1 Tap the channel with your PTZ camera.

2 Tap to open PTZ controls.;

3 Double-tap the channel to select it in full screen. Use the PTZ controls.



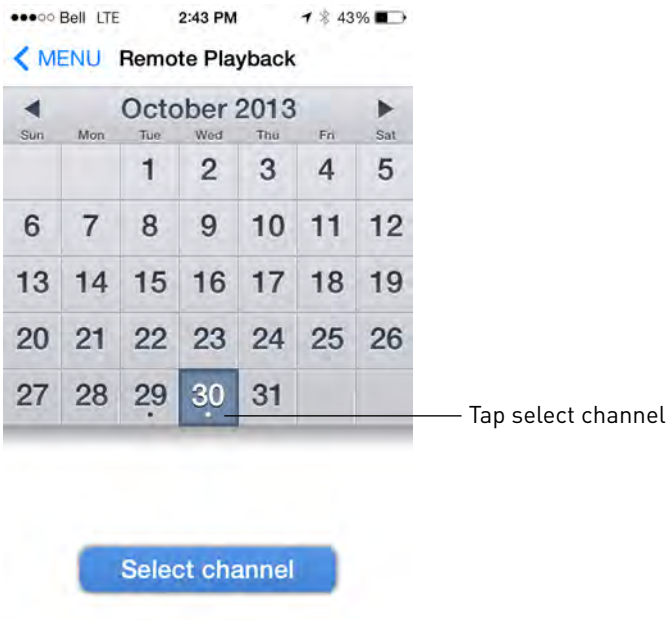
Using Remote Playback Mode on iPhone

Remote Playback Mode allows you to view recorded video saved on your DVR's hard drive.

To use remote playback mode:

1 From the Main Menu, tap **Remote Playback**.

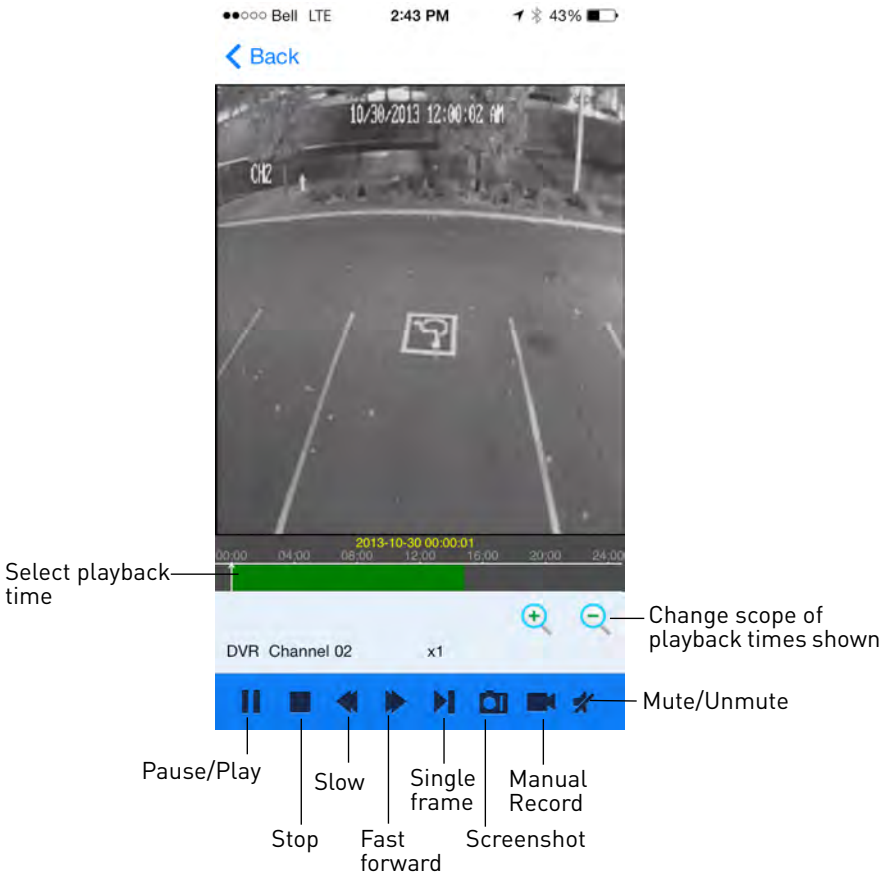
2 Tap **Select Channel**. Select the channel you would like to playback from.


Bell LTE 2:43 PM 43%
MENU
Remote Playback
October 2013
Sun Mon Tue Wed Thu Fri Sat
1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 31
Tap select channel
Select channel

3 The calendar shows any days that have recorded video for the selected channel with dots under the date. Tap on a date to view video from that day. Swipe up or down to change the month shown in the calendar.

Bell LTE 2:43 PM 43%
MENU Remote Playback
October 2013
Mon Tue Wed Thu Fri Sat
Swipe up or down to select month
Video available

4 Press ▶ to start playback. Use the on-screen playback controls.



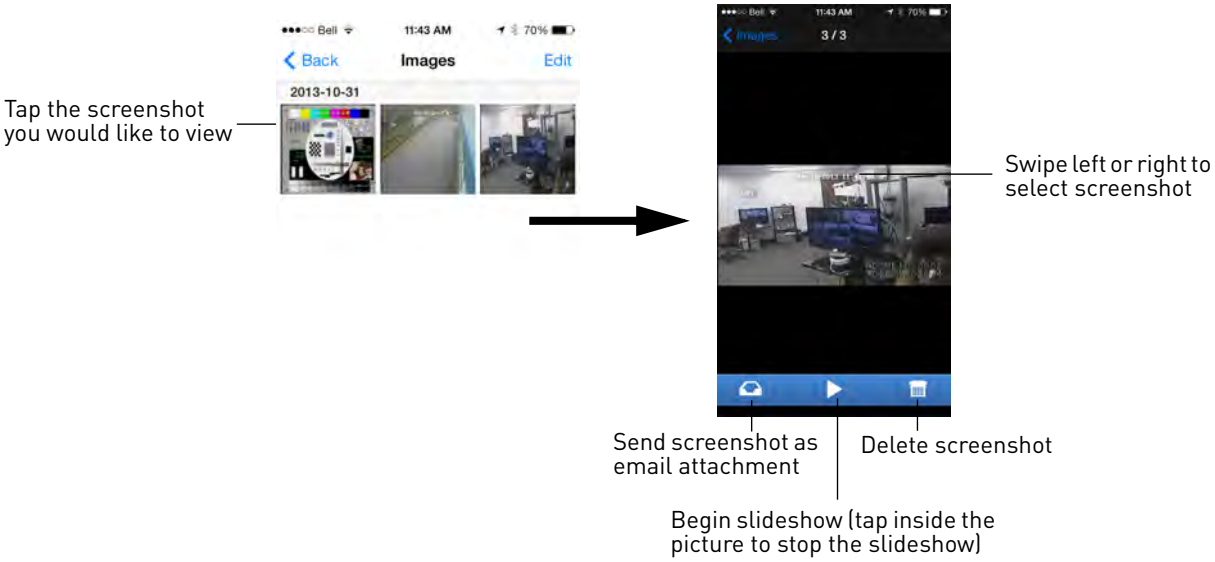
Viewing Screenshots

You can view screenshots or email them using the app.

NOTE: To email screenshots, you must have an email account configured in the Email app. Please refer to your iPhone user's guide or www.apple.com if you need support to set up the Email app.

To view screenshots:

1. From the Main Menu, tap **Image View**.
2. Select the DVR with screenshots you would like to view.
3. Tap the screenshot you would like to view.



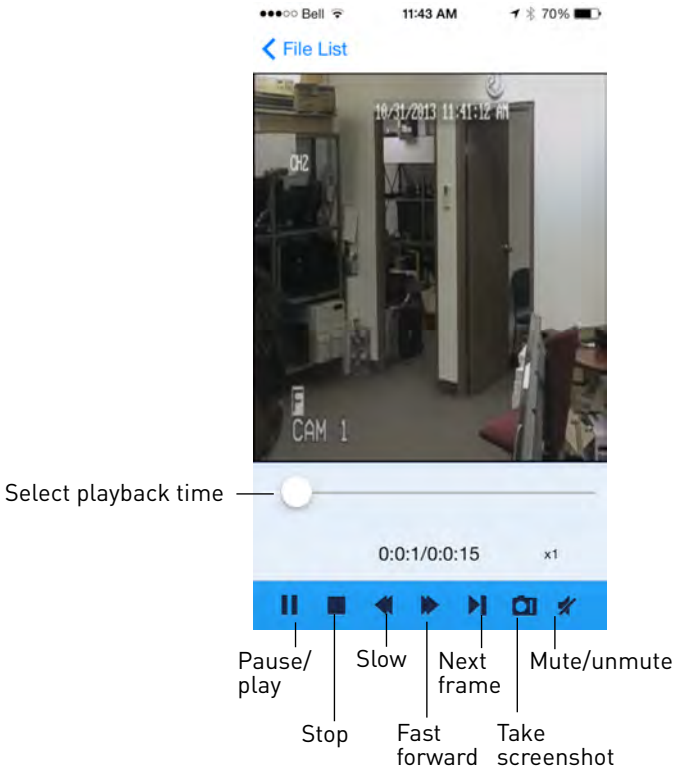
Viewing Manual Recordings

You can view manual recordings using the app.

To view manual recordings:

1. From the Main Menu, tap **Record Playback**.
2. Tap the DVR you would like to view manual recordings from.
3. Tap the recording file you would like to view.

4 Use the on-screen controls.



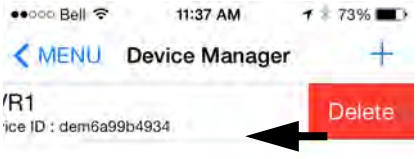
Using Device Manager to Manage DVR's

You can use the Device Manager to add, delete, or modify your DVR's.

To delete a DVR:

1 From the Main Menu, tap **Device Manager**.

2 Swipe to the left on the DVR you would like to delete and tap **Delete**.



Swipe left to delete a DVR

3 Tap **Delete** to confirm.

To modify a DVR:

1 From the Main Menu, tap **Device Manager**.

2 Tap on the DVR you would like to modify.

3 Change the connection details as needed and then tap **Save**.

iPad

Use the **Digi SummitHD** application to connect to your DVR on the iPad.

System requirements

- iOS version 5.0 and above.

NOTE: For the latest device compatibility list, visit www.flirsecurity.com/pro

Prerequisites

- Ports **80** and **9000** (or whichever ports your system is using) must be port forwarded to your router.
- You must create a DDNS account, and have the DDNS settings configured in your DVR.
- The DVR must have Internet access.
- You must have a DDNS address to log in remotely.
- An iTunes account.

NOTE: You will need to create an iTunes account before you can download the app. An iTunes store account requires a valid credit card number. The app is free of charge.

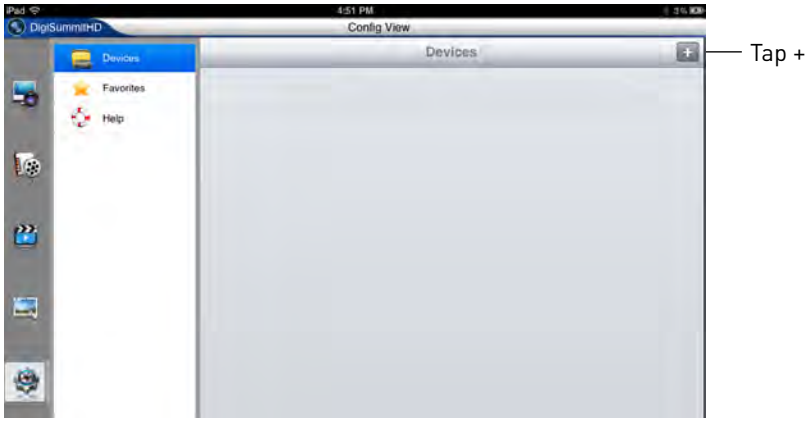
Connecting to your System Using Digi SummitHD

1 Install the **Digi SummitHD** app for free from the App Store.

2 Tap the Digi SummitHD icon ( ) to open the app.

3 Tap .

4 Tap **+**.



5 Configure the following:

- **Device Name:** Enter a name for your DVR of your choice.
- **IP Address:** Enter your **DDNS address** (e.g. tomsmith.myddns-flir.com).
- **Client Port:** Enter the **Client Port** (default: **9000**).
- **User Name:** Enter the **DVR's user name** (default: **admin**).

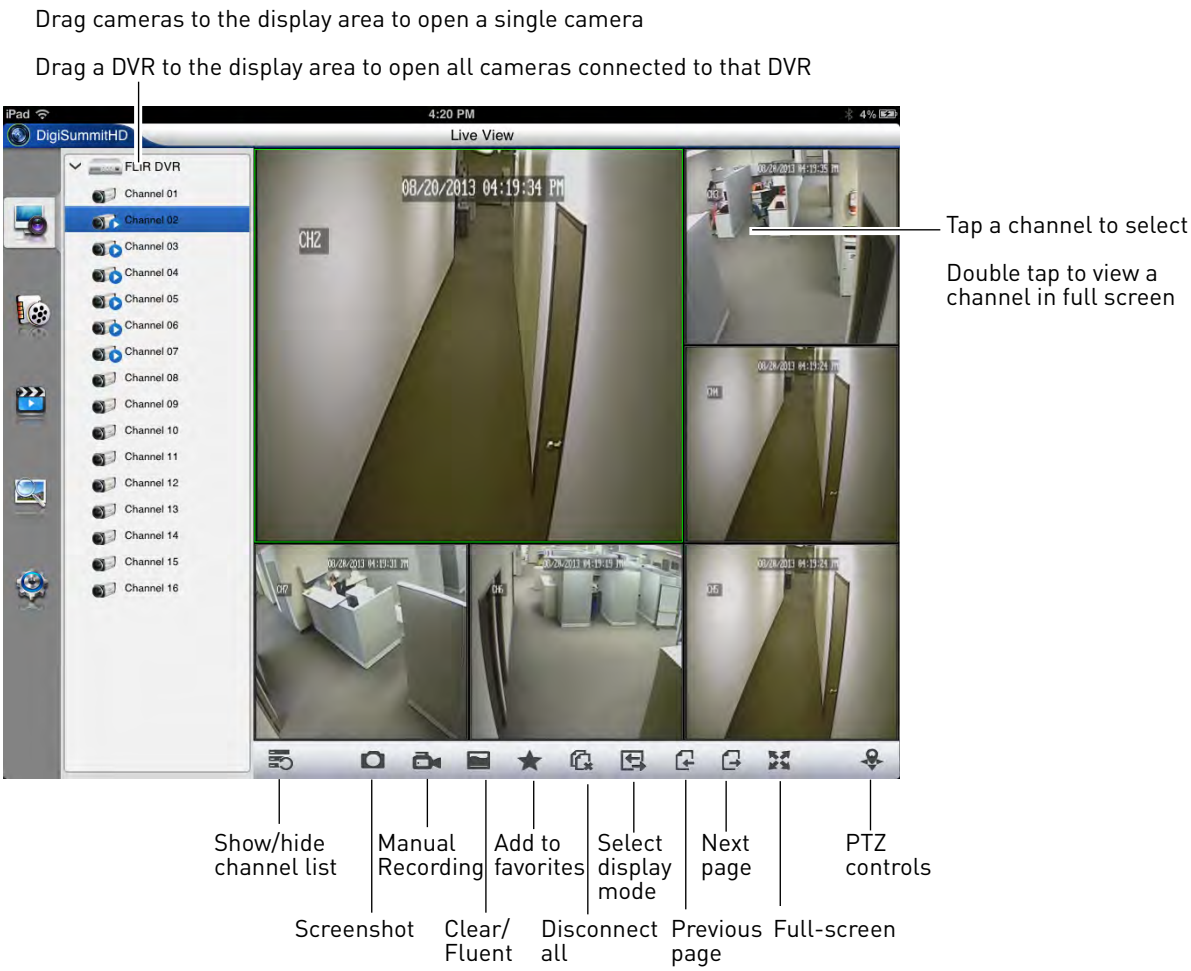
- **Password:** Enter the DVR password. By default the password is **000000**.

6 Tap **Save**. The app connects to your DVR and streams live video from your cameras.

NOTE: If this is the first time connecting, you will be prompted to change the password. Enter a new 6 character password and tap **Done**. Then, tap **Save** again to connect to your cameras.

Digi Summit Interface

You can use Digi Summit in landscape mode only.


Drag cameras to the display area to open a single camera
Drag a DVR to the display area to open all cameras connected to that DVR
Tap a channel to select
Double tap to view a channel in full screen
Show/hide channel list
Manual Recording
Add to favorites
Select display mode
Next page
PTZ controls
Screenshot
Clear/ Fluent
Disconnect all
Previous page
Full-screen

Taking Screenshots

1 Tap during live view or playback.

2 To view screenshots, see “Viewing Screenshots” on page 132.

Taking Manual Recordings

1 Tap during live view or playback to start manual recording from the selected channel.
Tap again to stop recording.

2 To view manual recordings, see “Viewing Manual Recordings” on page 133.

Using PTZ Controls

If you have a PTZ camera (not included) connected, you may control it using the app.

NOTE: You must configure the system to communicate with the PTZ camera locally before you can control it using the app. For details, see “Appendix B: Connecting a PTZ Camera” on page 147.

To use PTZ Controls:

1 Tap the channel with your PTZ camera.

2 Tap to open PTZ controls.

3 Double-tap the channel to select it in full screen. Use the PTZ controls.

Using Remote Playback Mode on iPad

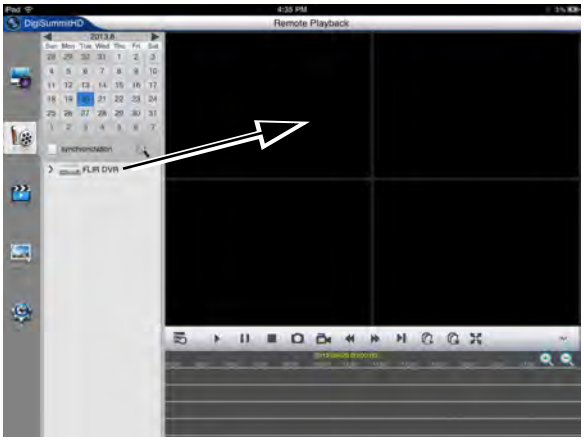
Remote Playback Mode allows you to view recorded video saved on your DVR's hard drive.

To use remote playback mode:

1 Tap .

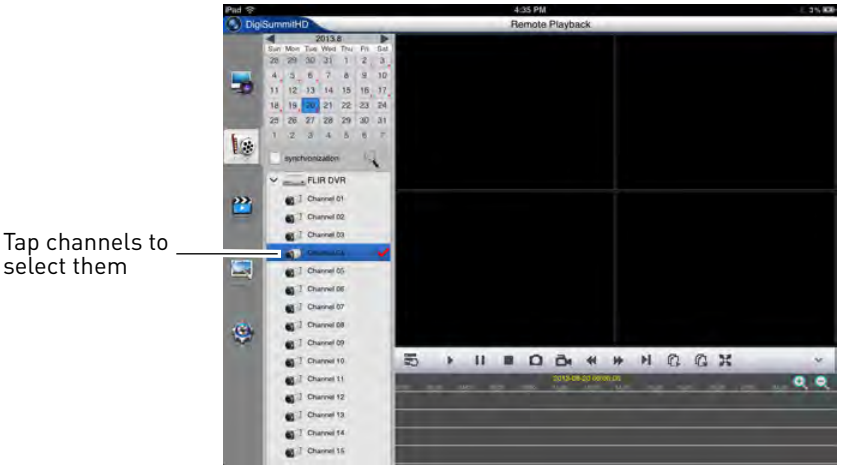
To open video for playback:

1 Drag the DVR or a camera to the display area to open the earliest available recordings from today.



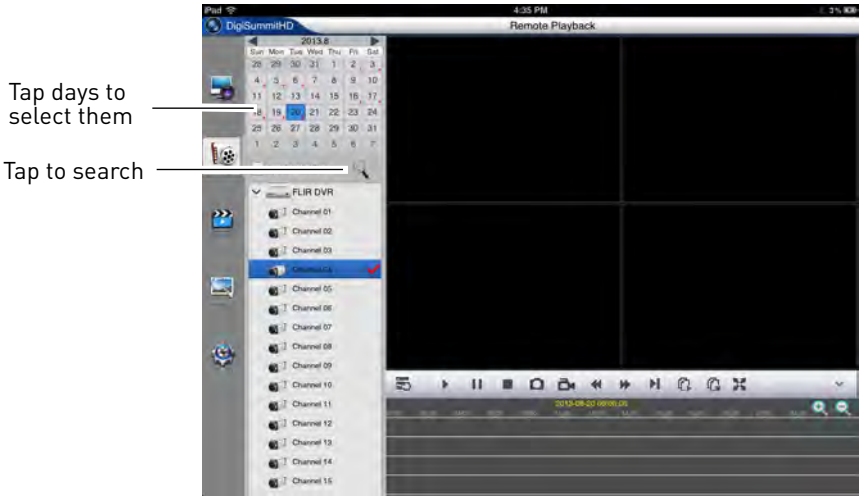
OR

1 Tap cameras to select them. Red dots will appear in the calendar on days that have video available.

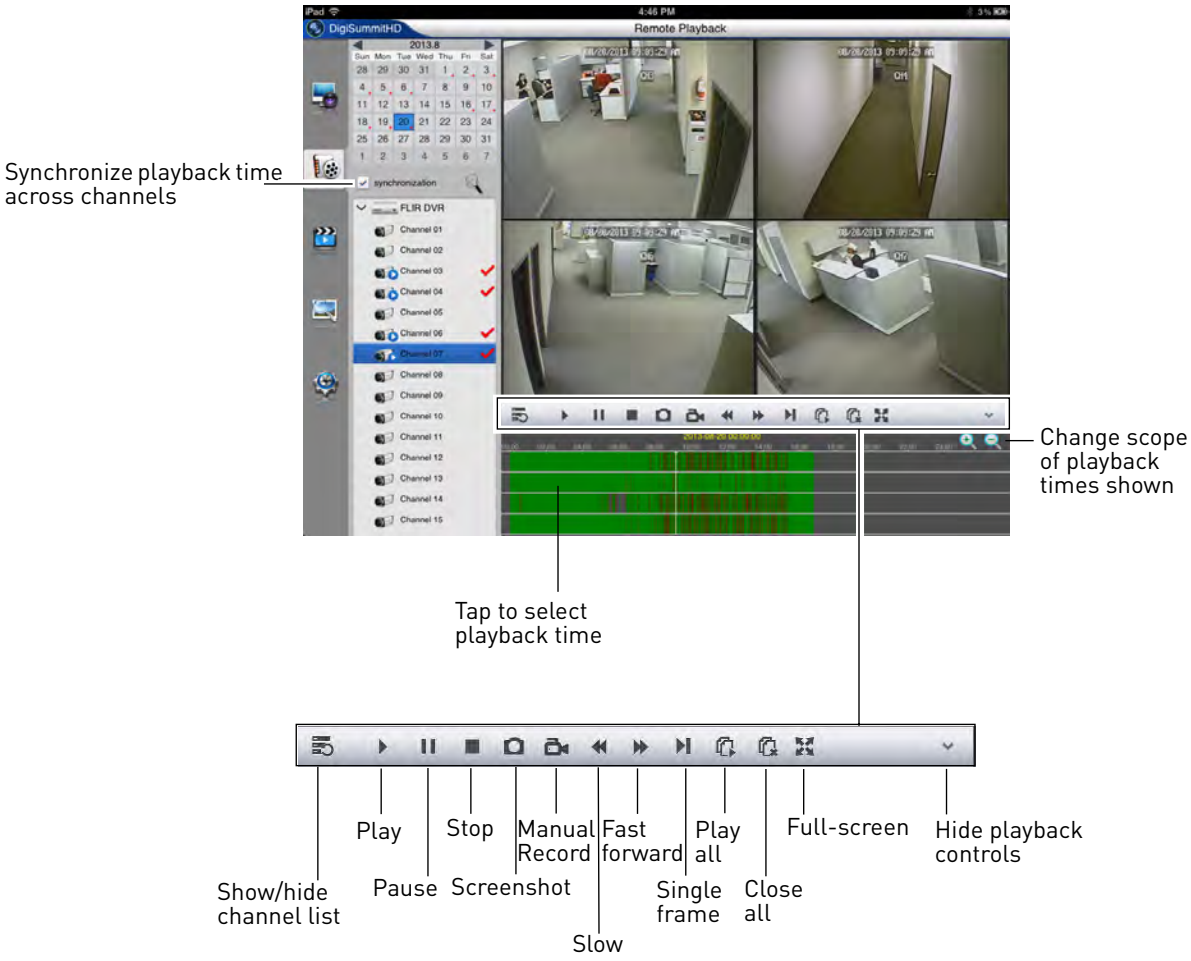


2 Tap a day to select it.

3 Tap .



4 Press ▶ to start playback. Use the on-screen playback controls.



Viewing Screenshots

You can view screenshots or email them using the app.

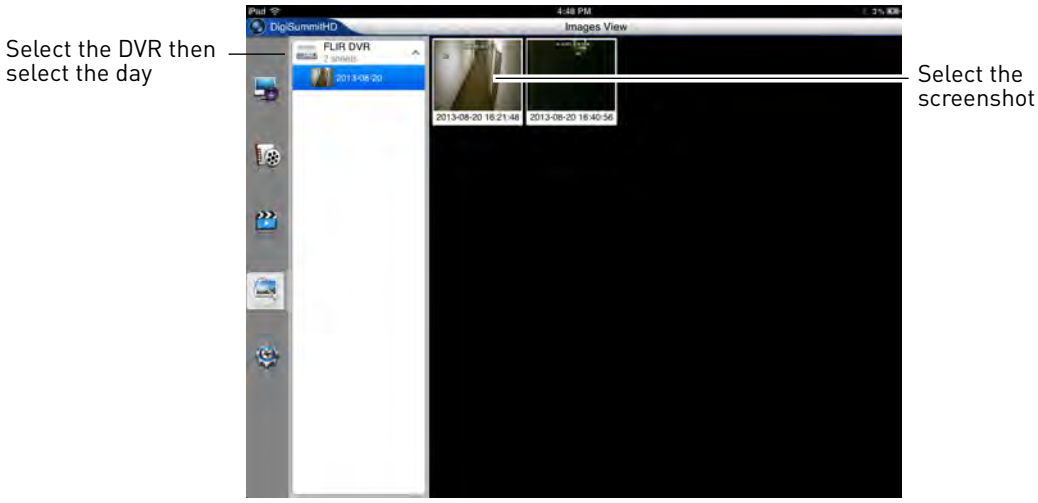
NOTE: To email screenshots, you must have an email account configured in the Email app. Please refer to your iPad's user's guide or www.apple.com if you need support to set up the Email app.

To view screenshots:

1 Tap .

2 Select the DVR with screenshots you would like to view. Then, select the day you would like to open.

3 Tap the screenshot you would like to view.



Viewing Manual Recordings

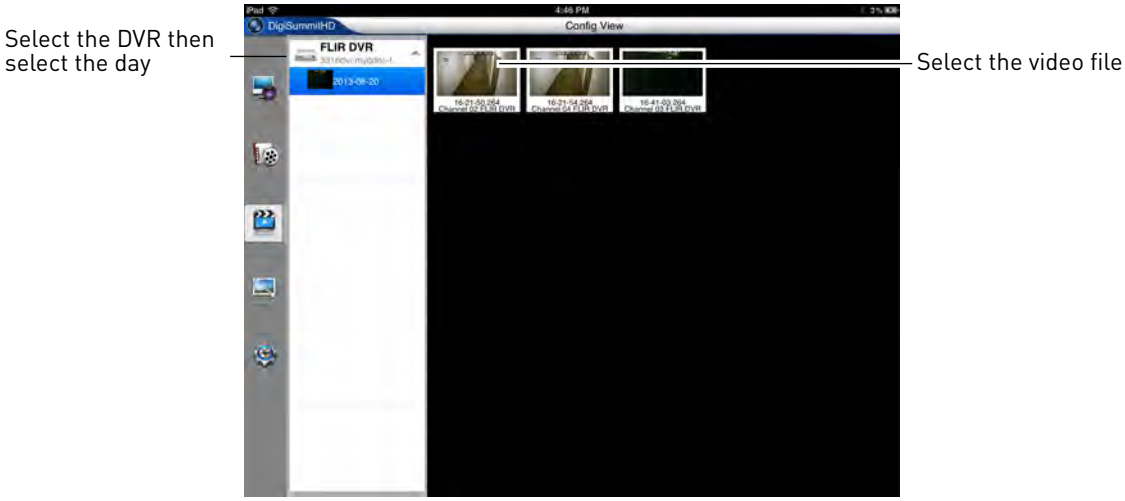
You can view manual recordings using the app.

To view manual recordings:

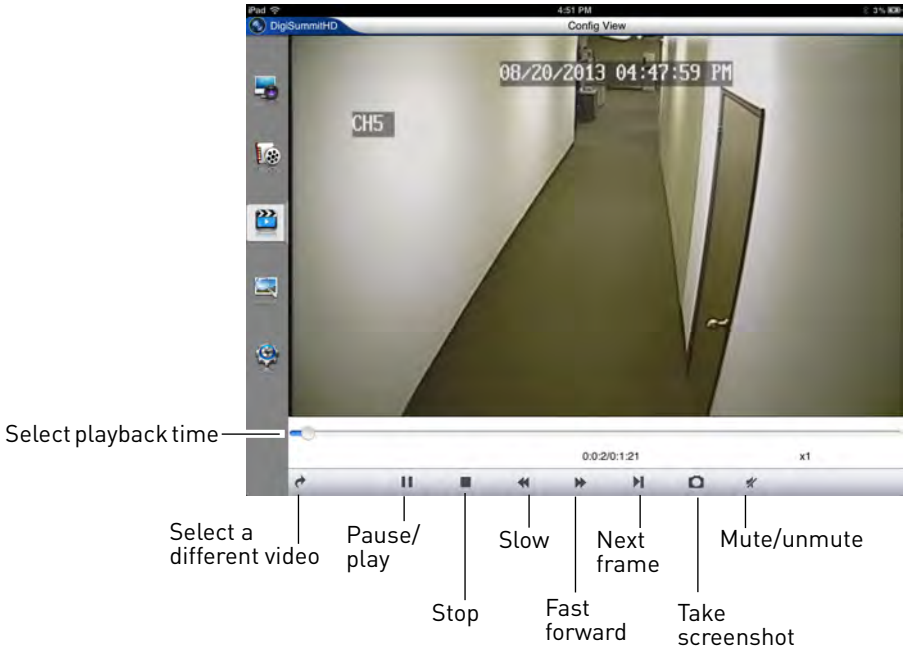
1 Tap .

2 Tap the DVR you would like to view manual recordings from. Then, select the day you would like to open.

3 Tap the recording file you would like to view.



4 Use the on-screen controls.



Using Device Manager to Manage DVR's

You can use the Device Manager to add, delete, or modify your DVR's.

To delete a DVR:

1 Tap .

2 Swipe to the right on the DVR you would like to delete and tap **Delete**.

Swipe right to delete a DVR

3 Tap **Delete** to confirm.

To modify a DVR:

1 Tap .

2 Tap on the DVR you would like to modify.

NOTE: Change the connection details as needed and then tap **Save**.

Managing Favorites

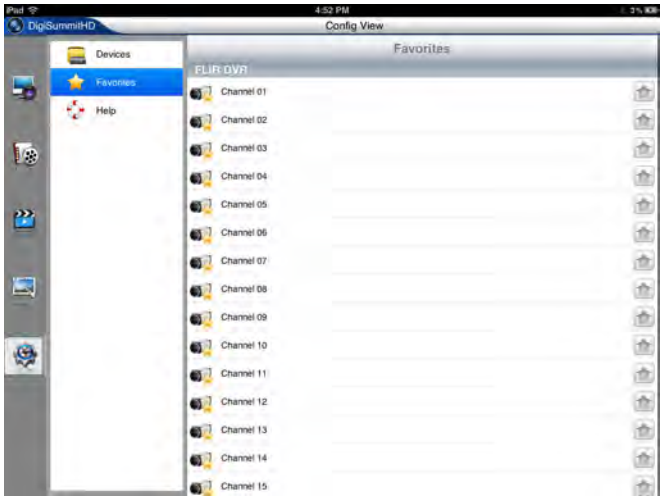
You can use Device Manager to add or remove cameras from your favorites list. Your favorites list appears in the Live View and Remote Playback modes for quick access to channels.

To add/remove favorites:

1 Tap .

2 Tap **Favorites**.

3 Tap the star next to a camera to add or remove it from your favorites.



Android

Use the **Digi Summit** application to connect to your DVR on your Android phone or tablet.

System requirements

- Android version 2.3 and above.

NOTE: For the latest device compatibility list, visit www.flirsecurity.com/pro

Prerequisites

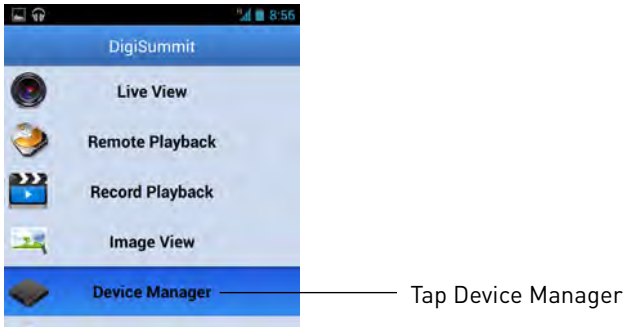
- Ports **80** and **9000** (or whichever ports your system is using) must be port forwarded to your router.
- You must create a DDNS account, and have the DDNS settings configured in your DVR.
- The DVR must have Internet access.
- You must have a DDNS address to log in remotely.

Connecting to your System Using Digi Summit

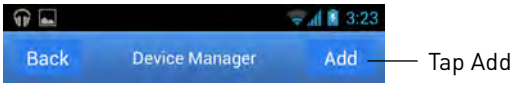
1 Install the **Digi Summit** app for free from the Google Play Store.

2 Tap the Digi Summit icon ( ) to open the app.

3 Tap **Device Manager**.

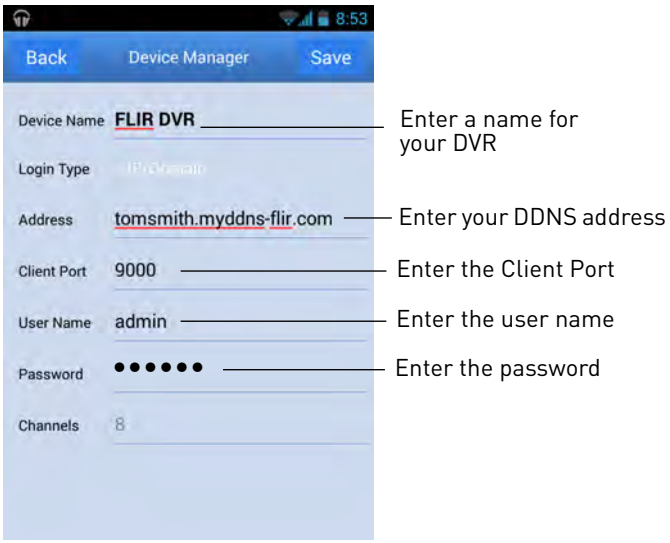


4 Tap **Add**.



5 Configure the following:

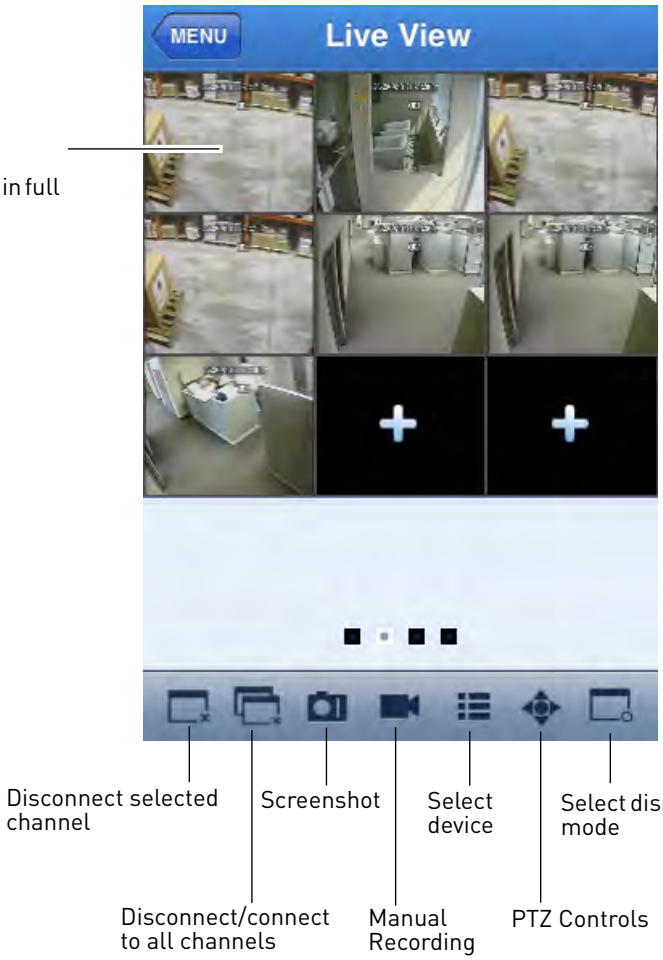
- **Device Name:** Enter a name for your DVR of your choice.
- **Login Address:** Enter your **DDNS address** (e.g. tomsmith.myddns-flir.com).
- **Client Port:** Enter the **Client Port** (default: **9000**).
- **User Name:** Enter the **DVR's user name** (default: **admin**).
- **Password:** Enter the DVR password. By default the password is **000000**.



6 Tap **Save**. The app connects to your DVR and streams live video from your cameras.

NOTE: If this is the first time connecting, you will be prompted to change the password. Enter a new 6 character password and tap **Save**. Then, tap **Save** again to connect to your cameras.

Digi Summit Interface.



Taking Screenshots

1 Tap during live view or playback.

- **If taking screenshots from live view:** Select the grid area you would like to take a screenshot from or tap to take a screenshot from all connected cameras.

2 To view screenshots, see "Viewing Screenshots" on page 125.

Taking Manual Recordings

1 Tap during live view or playback.

- **If taking manual recordings from live view:** Tap the grid area you would like to start recording on. Tap again when you would like to stop recording.
- **If taking manual recordings from playback:** Tap when you would like to stop recording.

2 To view manual recordings, see "Viewing Screenshots" on page 125.

Using PTZ Controls

If you have a PTZ camera (not included) connected, you may control it using the app.

NOTE: You must configure the system to communicate with the PTZ camera locally before you can control it using the app. For details, see "Appendix B: Connecting a PTZ Camera" on page 147.

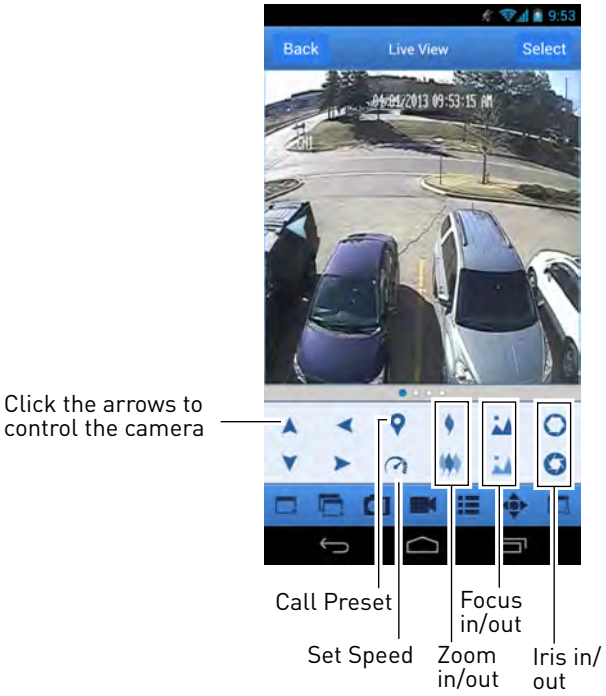
To use PTZ Controls:

1 Tap the channel with your PTZ camera.

2 Tap to open PTZ controls.

3 Double-tap the channel to select it in full screen.

4 Use the PTZ controls.



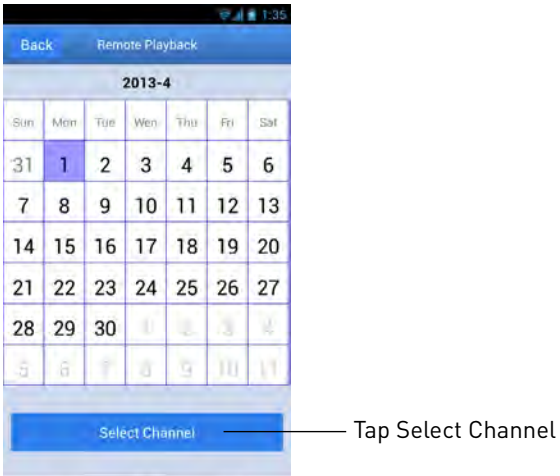
Using Remote Playback Mode on Android

Remote Playback Mode allows you to view recorded video saved on your DVR's hard drive.

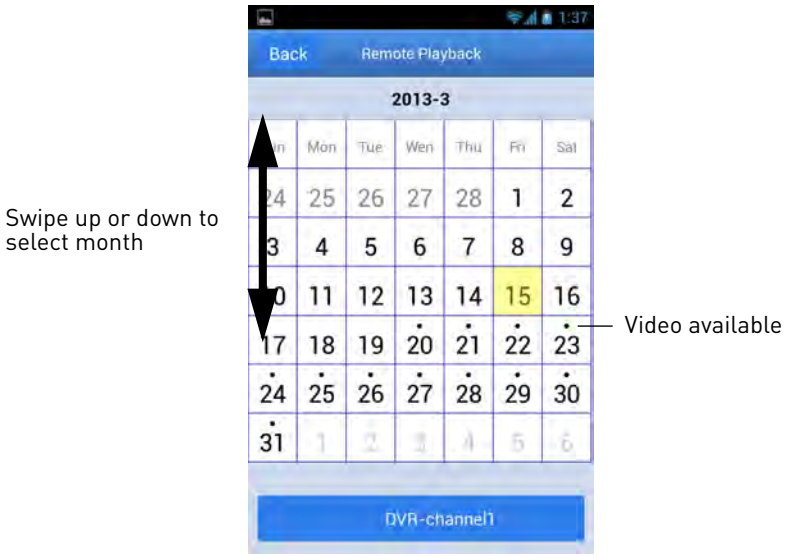
To use remote playback mode:

1 From the Main Menu, tap **Remote Playback**.

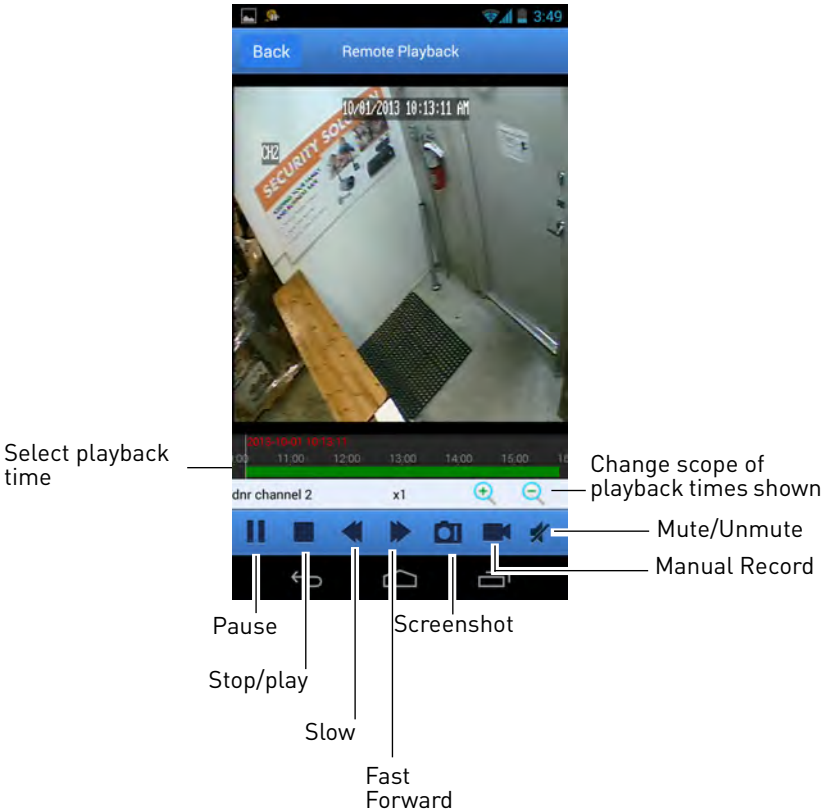
2 Tap **Select Channel**. Select the channel you would like to playback from.


Back
Remote Playback
2013-4
Sun Mon Tue Wen Thu Fri Sat
31 1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30
Select Channel
Tap Select Channel

3 The calendar shows any days that have recorded video for the selected channel with dots under the date. Tap on a date to view video from that day. Swipe up or down to change the month shown in the calendar.



4 Playback begins at the earliest available recordings from the selected day. Use the on-screen playback controls.



Viewing Screenshots

You can view screenshots or share them using the app.

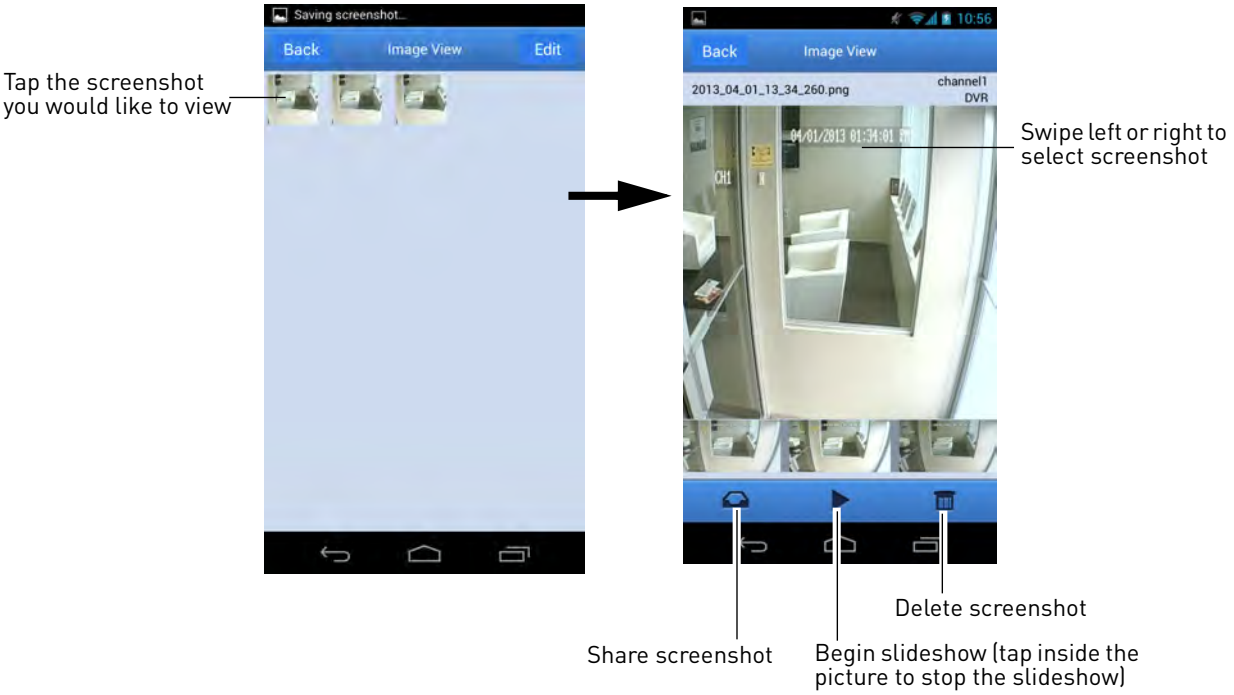
NOTE: To share screenshots, you must configure the apps used for sharing. FLIR does not support 3rd party applications.

To view screenshots:

1 From the Main Menu, tap **Image View**.

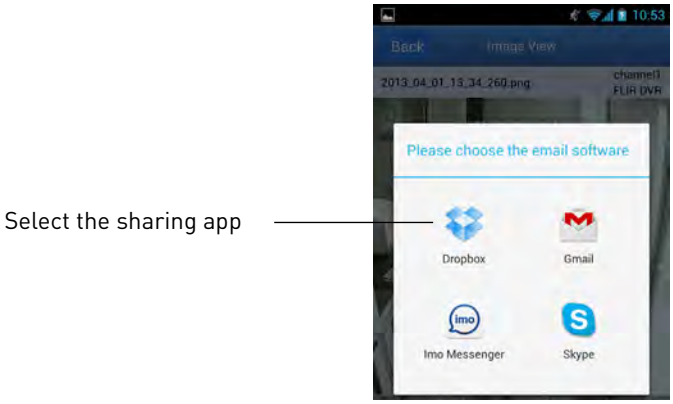
2 Select the DVR with screenshots you would like to view.

3 Tap the screenshot you would like to view.



To share screenshots:

1 Tap to share. Select an app that you would like to share the file with. Follow the app's instructions to share the file.



Viewing Manual Recordings

You can view manual recordings using the app.

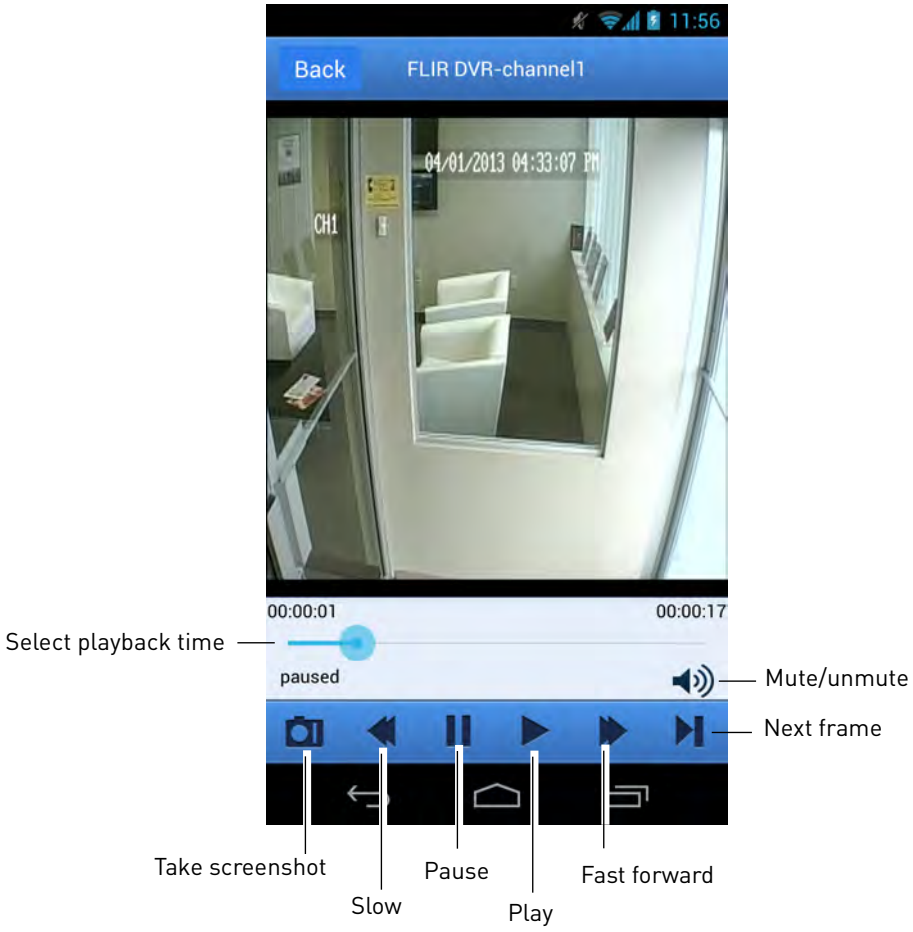
To view manual recordings:

1 From the Main Menu, tap **Record Playback**.

2 Tap the DVR you would like to view manual recordings from.

3 Tap the recording file you would like to view.

4 Use the on-screen controls.



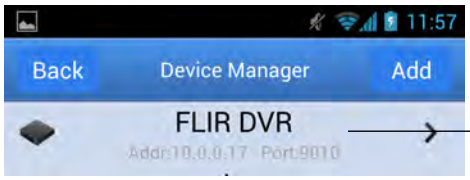
Using Device Manager to Manage DVR's

You can use the Device Manager to add, delete, or modify your DVR's.

To delete a DVR:

1 From the Main Menu, tap **Device Manager**.

2 Press and hold on DVR you would like to delete and then tap **Delete**.



To modify a DVR:

1 From the Main Menu, tap **Device Manager**.

2 Tap on the DVR you would like to modify.

3 Change the connection details as needed and then tap **Save**.

Appendix A: System Specifications

System

Operating System	Embedded LINUX
Pentaplex	Simultaneous View, Record, Playback, Backup & Remote Monitoring
Number of Channels	4/8/16/32 Channel
System Navigation	USB Mouse, IR Remote Controller
User Authority	By user group

Inputs/Outputs

Video IN	D3304: 4 x 1Vp-p, CVBS, 75ohms, BNC D3308: 8 x 1Vp-p, CVBS, 75ohms, BNC D3216: 16 x 1Vp-p, CVBS, 75ohms, BNC D3316: 16 x 1Vp-p, CVBS, 75ohms, BNC D3332: 32 x 1Vp-p, CVBS, 75ohms, BNC
Video Outputs	1 x HDMI, 1 x VGA, 1 x BNC (D3304 / D3308 / D3216) / 2 x BNC (D3316 / D3332)
Loop Output	D3304: 4CH, D3308: 8CH, D3216: 16CH, D3316: 16CH, D3332: 16CH
Audio IN	D3304: 4CH BNC, D3308: 8CH BNC, D3216: 4CH BNC, D3316: 16CH BNC, D3332: 16CH BNC
Audio OUT	D3304: 1CH BNC, D3308: 1CH BNC, D3216: 1CH BNC, D3316: 2CH BNC, D3332: 2BNC
USB Port	2x USB, USB 2.0
Alarm IN	D3304: 4CH, D3308: 8CH, D3216: 8CH, D3316: 16CH D3332: 16CH
Alarm OUT	D3304 / D3308 / D3216 / D3316: 1CH, D3332: 4CH
PTZ Control	RS-485 Pelco D & P Protocol

Display

Video Output Resolution	800*600,1024*768, 1280*1024,1440*900, 1920x1080
Live Display	D3304: 1, 4 D3308: 1, 4, 9 D3216/D3316: 1, 4, 9, 16 D3332: 1, 4, 9, 16, 25, 32

Recording

Video Compression	H.264
Audio Compression	G.711
Recording Resolutions Supported	NTSC: 960x480 (960H), 960x240, 720x480 (D1), 720x240 (2CIF), 480x240, 360x240 (CIF) PAL: 960x576 (960H), 960x288, 720x576 (D1), 720x288 (2CIF), 480x288, 360x288 (CIF)

Recording Speed	D3304/D3308/D3316/D3332: 960H (960x480) @ 30fps per channel / D1 (720x480) @ 30fps per channel D3216: 480x240 @ 30fps per channel / CIF (360x240) @ 30fps per channel / D1 (720x480) @ 14fps per channel / 2CIF (720x240) @ 14fps per channel / 960H (960x480) @ 10fps per channel / 960x240 @ 10fps per channel
Recording Quality Control	3 levels
Motion Area Setting	Adjustable grid (30x44) NTSC Adjustable grid (36x44) PAL
Sensitivity Levels	8
Pre Recording	Max 10 seconds
Post Recording	Max 5 minutes
Covert Video	Yes

Playback

Playback Channel	1/4/8/16 Adjustable
Playback Speed	Variable Max 16x
Playback Players	Backup Player
Search	By time & event
Log Search	Up to 1,000,000 lines for motion detected, configuration changes, connects/disconnects and video loss.
Audio Play	Yes

Storage & Backup

Storage	D3304/D3308/D3216/D3316: Up to 2HDDs (SATA), 2.5" or 3.5" D3332: Up to 8HDD (SATA), 3.5"
Maximum Capacity	D3304/D3308/D3216: Up to 2x2TB D3316: Up to 2x3TB D3332: Up to 8x3TB
Backup Media	USB Flash Drive, USB External HDD, E-SATA, External HDD
Backup File Format	H.264 file (AVI generator included)
Configuration Backup	Via USB Device

Network

Supported Operating Systems	Windows™ XP, Vista, 7, 8 Mac OSX Snow Leopard 10.6 or above
Browser	Internet Explorer & Safari 6.0
Email Notification	Text with snapshot
Instant Smart Phone Compatibility*	Smart Phone & Tablet Compatibility: iPad™, iPhone™, Android (version 2.3 & above).
System Configuration	Full setup configuration over network
Ports	Programmable by user
Network Protocol	TCP/IP, DHCP, UDP, DDNS, PPPoE
Network Interface	10/100-Base-TX, RJ-45
Network Speed Control	48kb~8MB/sec.
Firmware Upgrade	Via USB device and network
Time Synchronization	Auto time sync by NTP server

General

Power Supply	D3304/D3308/D3216/D3316: 100VAC-240VAC, 5A, 50/60Hz D3332: 100VAC-240VAC, 6.3A, 50/60Hz
Unit Dimensions (W x D x H)	D3304/D3308/D3216/D3316: 14.96"/380mm x 13.39"/340mm x1.97"/50mm D3332: 17.32"/440mm x 18.11"/460mm x 3.5"/89mm
Unit Weight (KGs)	D3304/D3308/D3216/D3316: 3 kg / 6.6lbs D3332: 7.8kg / 17.2lbs
Operating Temperature	32° ~ 104°F / 0°~40°C'
DDNS	FLIR DDNS included
Humidity	10~90% RH

As our products are subject to continuous improvement, FLIR Systems, Inc. and its subsidiaries reserve the right to modify product design, specifications, and prices without notice and without incurring any obligation. E&OE

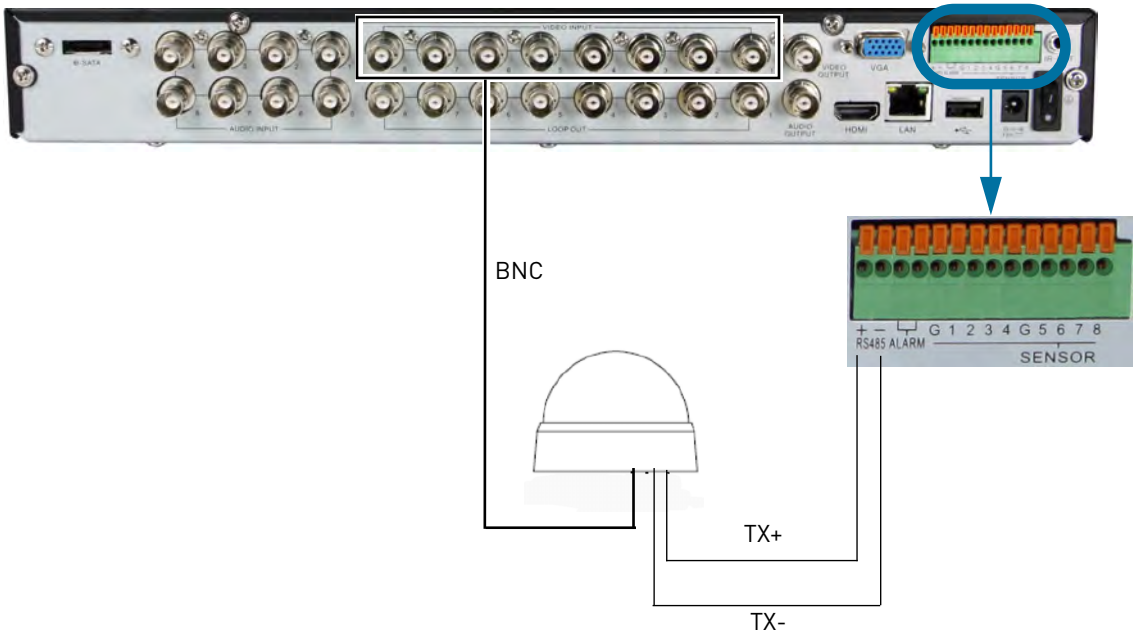
Appendix B: Connecting a PTZ Camera

You can connect RS-485 PTZ cameras (not included) to the RS485 ports on the rear panel.

To connect a PTZ camera to the system:

1. Connect the Transmit+ (TX+) Cable to the **+** side of the **RS485** port on the rear panel.
2. Connect the Transmit- (TX-) Cable to the **-** side of the **RS485** port on the rear panel.
3. Connect the video cable to a BNC port.

8-channel model shown



Configuring PTZ Settings

Before you can use the PTZ controls, you must enter your camera's PTZ protocol details into the DVR.

Prerequisite:

- Obtain the PTZ protocol details for your camera. Check your camera's instruction manual for details.

To enter PTZ camera settings in the DVR:

1. Right-click to open the Menu Bar and click the Main Menu button ( ).
2. Click **Device** and select the **PTZ** tab.

3 Configure the following according to your PTZ camera's specifications:

- **Channel**: Select the channel the PTZ camera is connected to.
- **Protocol**: Select from **Pelco-D** or **Pelco-P**.
- **Baud rate**: Select the PTZ camera's baud rate.
- **Data Bit**: Select from **5~8** data bits.
- **Stop Bit**: Select from **1** or **2** stop bits.
- **Parity**: Select from **None, Odd, Even, Mark** or **Space**.
- **Cruise**: Select **Enable** to enable PTZ cruise.
- **Address**: Enter the PTZ camera's address

Use the Copy To drop-down menu to copy the PTZ settings to multiple channels.

4 Click **Apply** to save your settings.

Using the PTZ Menu (Local DVR)

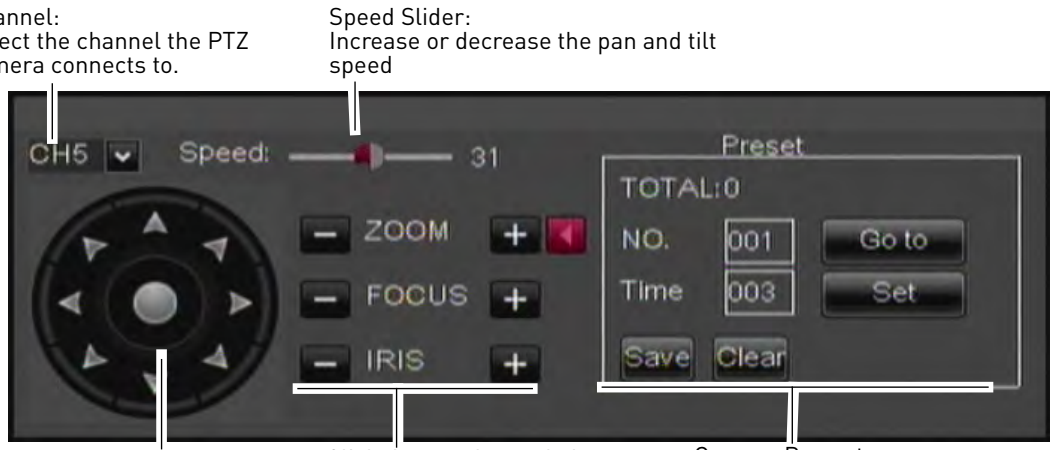
To control the PTZ camera locally on your DVR:

1 Select the channel that the PTZ camera is connected to.

2 Press the **PTZ** button once and release then press and hold. Enter the system password. The PTZ menu opens.

Press and release then press and hold

3 Use the on-screen PTZ controls to control the camera.



PTZ Presets and PTZ Cruise

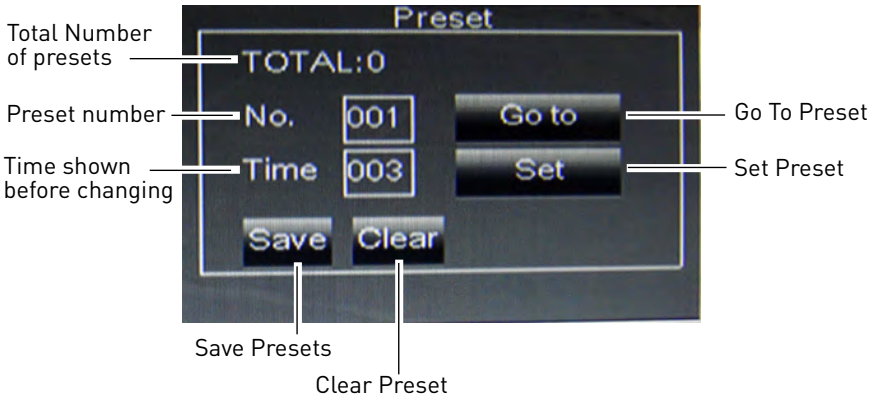
You can set preset positions for your PTZ cameras. You can also use PTZ cruise to have the camera automatically cycle through presets.

Setting PTZ Presets

1 Using the PTZ controls, move the camera into position.

2 (Optional) In the **Time** field, select the number of seconds the camera will remain in that position during PTZ cruise before going to the next position.

3 Click **Set** to set the preset. The Total and No. field will automatically increase. The Total field shows you the total number of created presets, and the No. field shows you the number of the preset you are currently creating.



4 Complete the steps above to create additional presets as needed. Press **Save** when you are finished to save all created presets.

Selecting PTZ Presets

1 In the **No.** field, select the number of the preset you would like to select.

2 Click **Go to** to go to the preset.

Deleting PTZ Presets

1 In the **No.** field, select the number of the preset you would like to delete.

2 Click **Clear** to delete the preset and click **Save** to save your changes.

Starting / Stopping PTZ Cruise

When PTZ cruise is enabled, the camera will cycle through saved presets. You must set and save presets to use PTZ cruise.

To start / stop PTZ cruise:

1 Right-click to open the Menu Bar and click the Start Cruise button ( ). Enter the system password. The camera will cycle through PTZ presets.

- To stop the PTZ cruise, right-click to open the Menu Bar and click the Stop Cruise button ( ). Enter the system password.

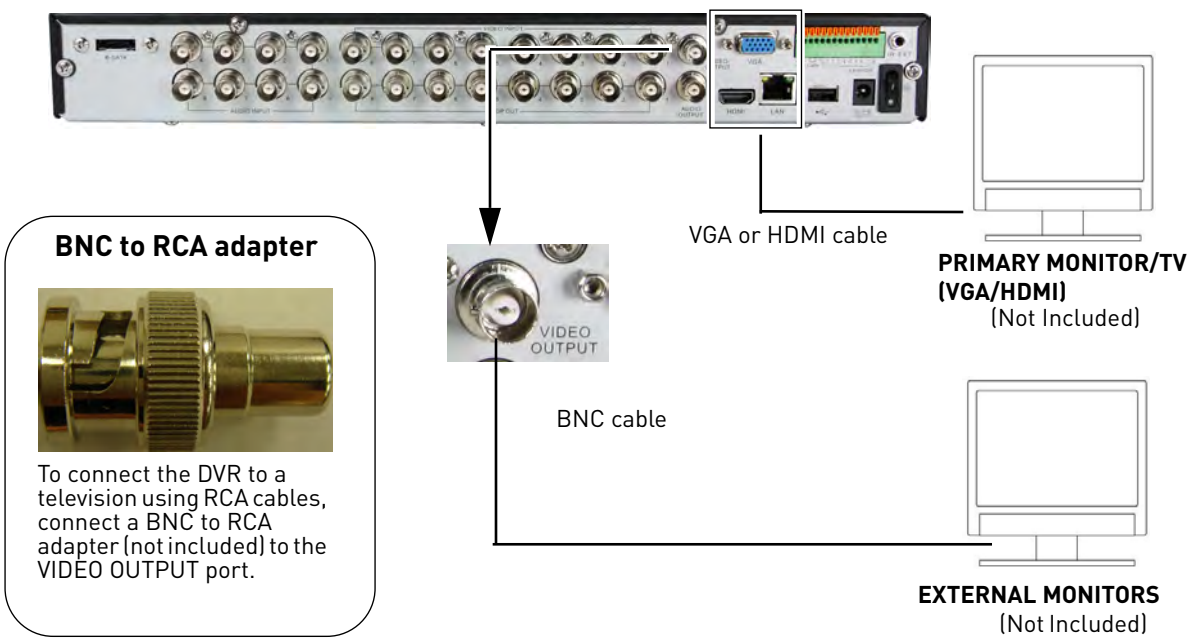
Appendix C: Connecting Additional External Monitors

Connect one monitor to the **VGA** port and one to the **HDMI** port to display the system interface on two monitors simultaneously.

Use the **Video Output** port (BNC) on the rear panel of the system to connect an external monitor. This is useful if you need to monitor the system from a second location (e.g. a back office).

- You can press **0** on the remote control three times to switch the mouse and system interface between the monitor connected to the VGA/HDMI port and the monitor connected to the Main port.

8-channel model shown



BNC to RCA adapter

To connect the DVR to a television using RCA cables, connect a BNC to RCA adapter (not included) to the VIDEO OUTPUT port.

Customizing the Channel Arrangement on the External Monitor

You can use the steps below to create a custom split-screen display on a secondary monitor connected to the **Video Out** port.

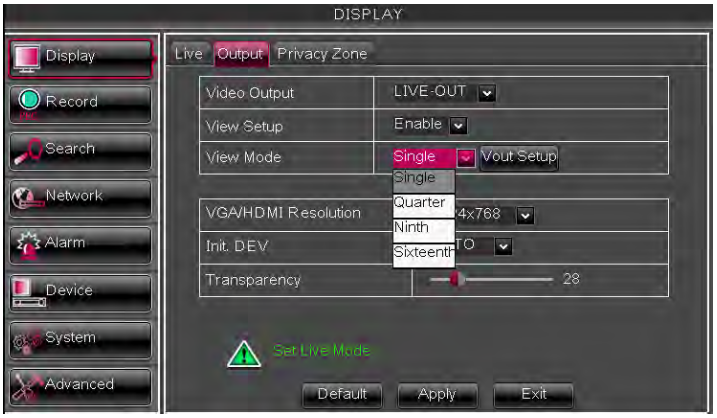
To customize the channel arrangement on the external monitor:

1. Connect an external monitor to the **Video Out** port, as shown above.
2. Press **0** three times on the remote control to move the mouse and system interface to the monitor connected to the Video Out port.
3. Right-click and click the Main Menu button ( ).
4. Click **Display→Output**.

5 Under **View Setup**, select **Enable**. This lets you select and arrange the channels you want to show on the screen.

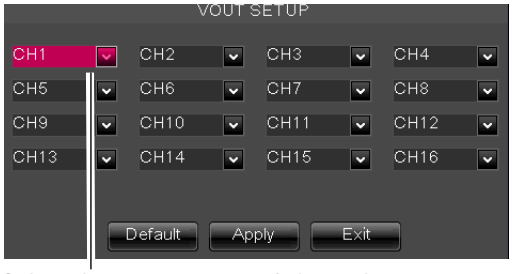
NOTE: Enabling View Setup disables your ability to change channels the normal way on the selected monitor. You will need to disable View Setup to return to normal operation.

6 Under **View Mode**, select the desired viewing mode: **Single**, **Quad**, **Nine**, or **Sixteen**.



7 Click **Vout Setup**. A menu appears that allows you to select the arrangement of channels.

8 Click the drop-down menus to select which channels to show on the screen and the arrangement of channels.



9 Click **Apply** to save changes. Click **Ok**. Right-click repeatedly to and return to live viewing.

10 Press **0** on the remote control 3 times to restore the system interface to the VGA/HDMI monitor.

Main and Spot Video Outputs (D3316/D3332 Only)

On the D3316 and D3332, connect external monitors to either the **Main** or **Spot** port.

- The Spot port automatically shows channels in Sequence View. It can also be configured to show 1 channel in full-screen or multiple channels in split-screen.
- The Main port can be used to connect an additional monitor for observation, or to use a BNC monitor or TV (using a BNC to RCA adapter, not included) to control the DVR. You can press **0** on the remote control three times to switch the mouse and system interface between the monitor connected to the VGA/HDMI port and the monitor connected to the Main port.

Configuring the Spot Monitor for Full-Screen or Split-Screen

By default, a monitor connected to the Spot port automatically shows channels in Sequence View.

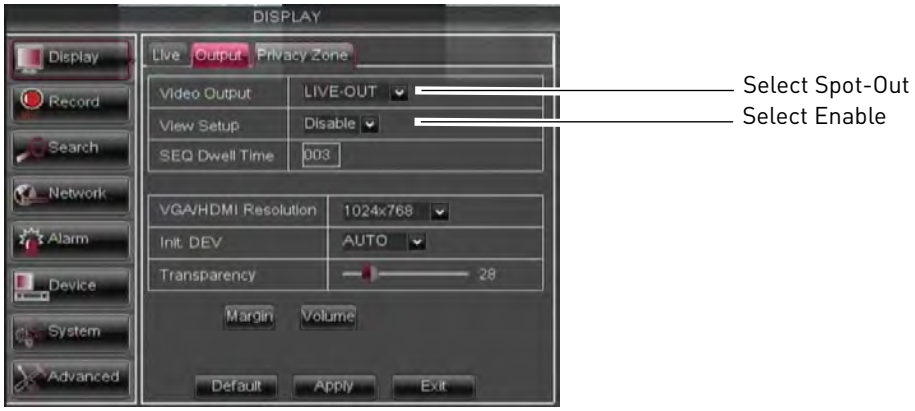
To configure the Spot monitor to show channels in split-screen:

1 Right-click to open the Menu Bar and click the Main Menu button ( ).

2 Click **Display** and select the **Output** tab.

3 Under **Video Output**, select **Spot-Out** to configure settings for the monitor connected to Spot.

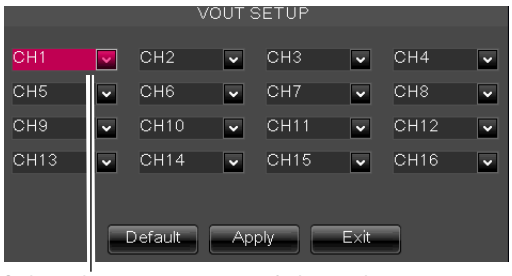
4 Under **View Setup**, select **Enable**. This lets you select and arrange the channels you want to show on the screen.



5 Under **View Mode**, select **Single** to show 1 channel in full-screen, **Quarter** to show 4-channels in split-screen, or **Ninth** to show 9-channels in split-screen.

6 Click **Spot Sequence**. A menu appears that allows you to select the arrangement of channels you would like to show on the Spot monitor.

7 Click the drop-down menus to select which channels you would like to show on the screen and the arrangement of channels.



Select the arrangement of channels on screen

8 Click **Apply** to save changes. Click **Ok**. Right-click repeatedly to exit all menus and return to live viewing.

Appendix D: Recording Audio

The system can also record audio for up to 4 channels (D3304 or D3216), 8 channels (D3308), or 16-channels (D3316/D3332). You must have audio-capable cameras (not included) or self-powered microphones (not included) in order to record audio on the system.

8-channel model shown

Connect a BNC audio cable from the camera into the corresponding Audio INPUT port

NOTE: On D3316 and D3332, connect the included octopus cable to the Audio In and then connect BNC audio cables from the cameras to the corresponding connectors on the octopus cable.

To enable audio recording:

1. Connect the BNC video cable from the camera to one of the BNC **Video INPUT** ports on the rear panel of the DVR.
2. Connect the RCA audio cable from the camera to the corresponding **Audio INPUT**.
3. Right-click to open the Menu Bar and click the Main Menu button ( ).
4. Click **Record** and select the **MainStream** tab.

Check Audio to enable audio recording on each channel

5. Ensure the **Audio** checkbox is checked next to the channel the audio-enabled camera is connected to.
6. Click **Apply** to save your changes.

Appendix E: Replacing the Hard Drive

The system comes with a pre-installed SATA hard drive. You can expand the hard drive capacity with a maximum of two 2TB 3.5" or 2.5" SATA hard drives (for a maximum storage space of 4TB).

NOTE: The D3332 supports up to eight 2TB 3.5 SATA hard drives (for a maximum storage capacity of 16TB). For D3332, you must use hard drives rated for 7200RPM or higher. Different steps are required to install hard drives on the D3332. For details, see "Installing Hard Drives (D3332)" on page 158.

Removing the Hard Drive

Make sure that the power cable has been disconnected before changing the hard drive.

1 Remove the screws from each side panel (x2) and rear panel (x4) of the cover.

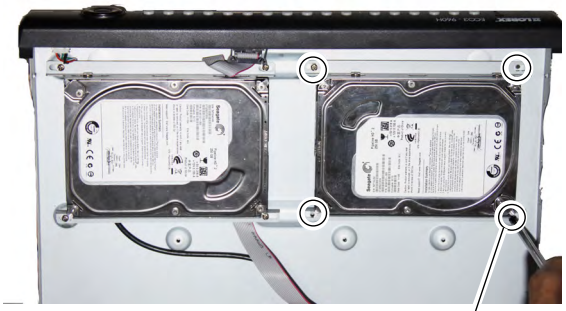
2 Gently slide the cover away from the rear panel and lift off. Be careful of sharp edges.

3 Disconnect the power and data cables.

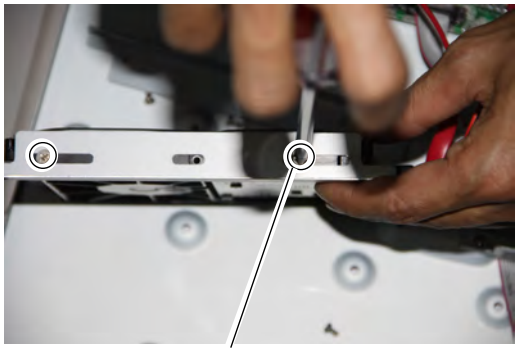
4 Next remove the hard drive from the housing:

- If your system has a 3.5" hard drive, remove the 4 screws holding the hard drive bracket and remove the bracket from the DVR. Remove the 4 screws securing the hard drive to the bracket

and remove the hard drive from the bracket. Replace the hard drive bracket and hard drive bracket screws.

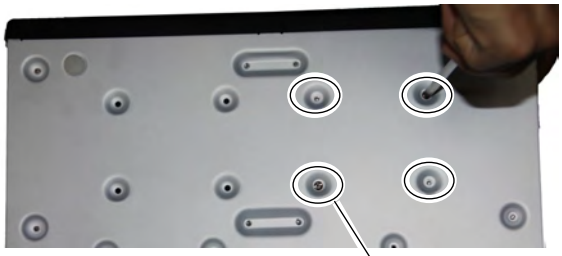


Remove hard drive bracket



Remove the hard drive screws

- If your system has a 2.5" hard drive, turn the DVR over carefully. Hold the hard drive in place and remove the 4 screws securing the hard drive. Keep holding the hard drive and turn the DVR back over. Remove the hard drive from the DVR.



Remove the hard drive screws

> **Make sure to hold the hard drive in place while removing the hard drive screws and turning the DVR to avoid damaging the DVR.**

5 Replace the DVR cover.

Installing the Hard Drive

> **Make sure that the power cable has been disconnected before changing the hard drive.**

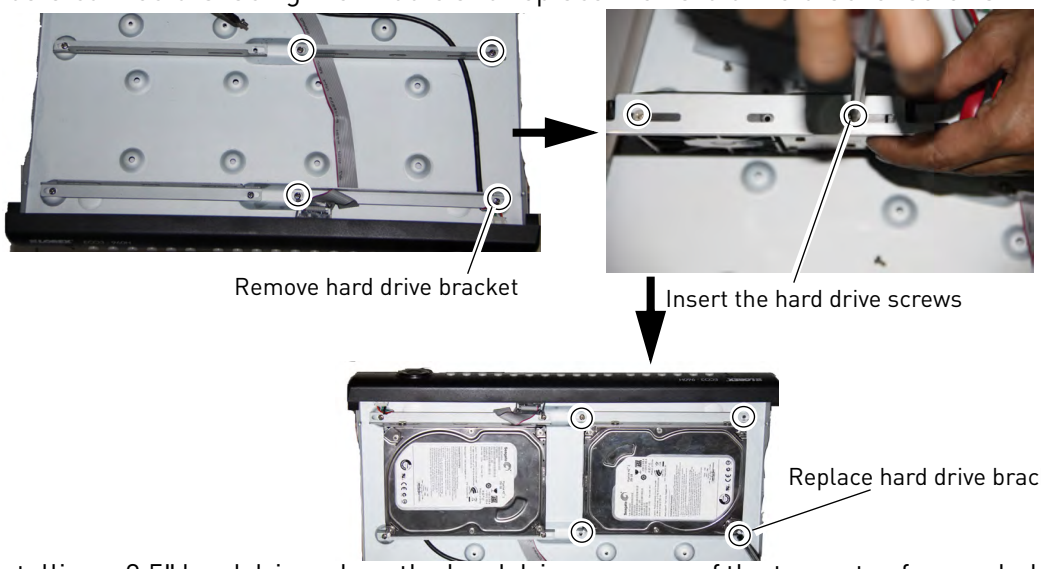
1 Remove the screws from each side panel (x2) and rear panel (x4) of the cover.

2 Gently slide the cover away from the rear panel and lift off. Be careful of sharp edges.

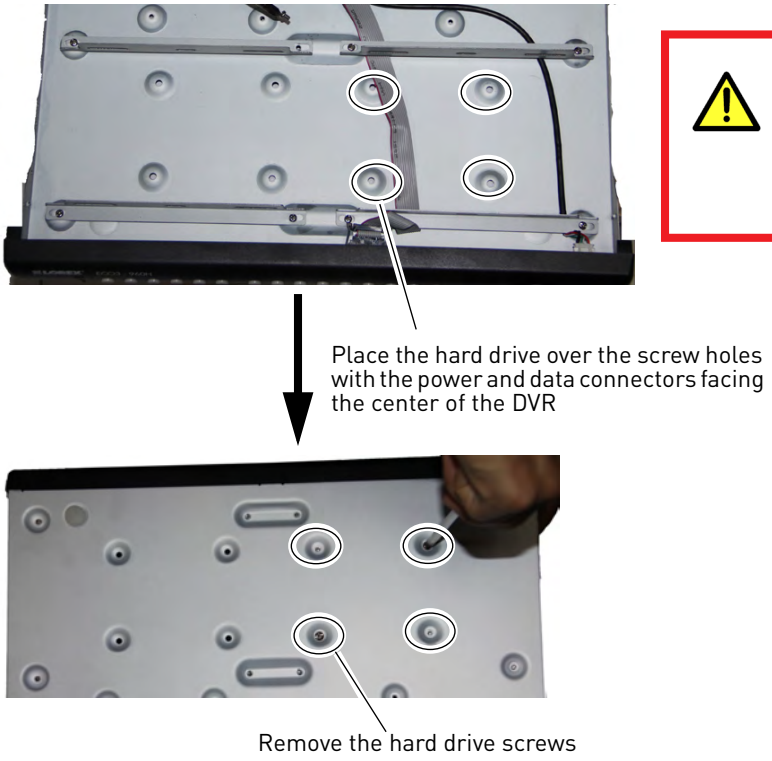
3 Next, install the hard drive:

- If installing a 3.5" hard drive, remove the 4 screws holding the hard drive bracket and remove the bracket from the DVR. Place the hard drive in the bracket and insert 4 screws to secure

the hard drive to the bracket. Place the hard drive and bracket back in the DVR with the power and data connectors facing the middle and replace the hard drive bracket screws.



- If installing a 2.5" hard drive, place the hard drive over one of the two sets of screw holes with the power and data connectors facing the center of the DVR. Hold the hard drive in place and carefully turn the DVR over. Insert 4 hard drive screws to secure the hard drive. Turn the DVR back over.


Place the hard drive over the screw holes with the power and data connectors facing the center of the DVR
Remove the hard drive screws

Make sure to hold the hard drive in place while removing the hard drive screws and turning the DVR to avoid damaging the DVR.

4 Connect the power and data cables.

5 Replace the DVR cover.

Installing Hard Drives (D3332)

> ⚠ Make sure that the power cable has been disconnected before changing the hard drive.

Steps to service the hard drives on D3332 depend if you are installing or removing hard drives 1~4 or 5~8.

Step 1 of 3: Remove the DVR cover:

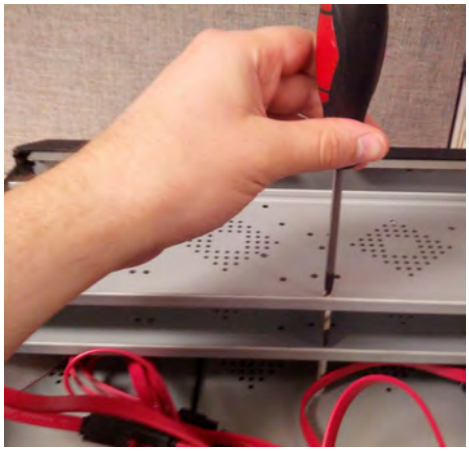
1 Remove the rear panel screws (2x).

NOTE: You do not need to remove the side panel screws.

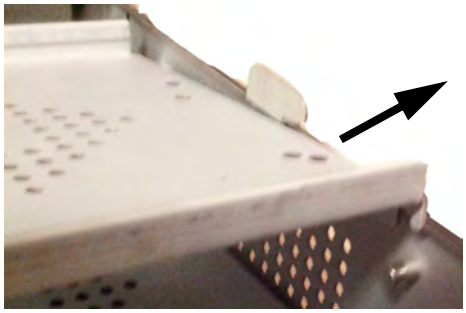
2 Slide the top panel back about 1/2" and then lift it off of the DVR.

Step 2A of 3: Install hard drives 5~8:

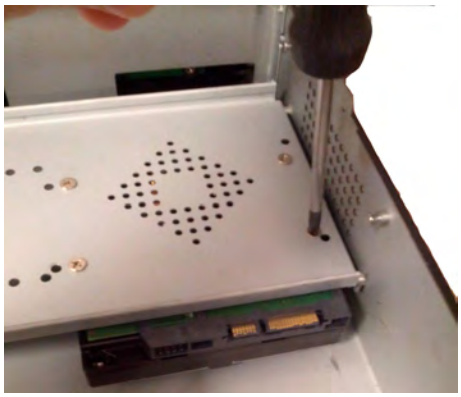
1 Remove the screw at the top of the center beam.



2 Lift the back of the top HDD plate and pull it up to remove it from the DVR.

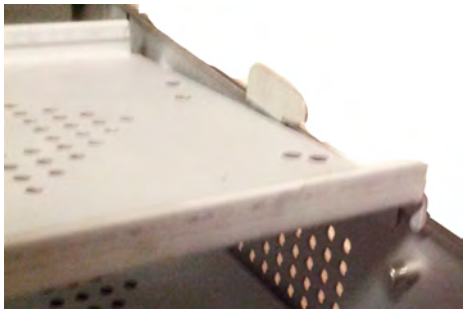


3 Place the HDD(s) under the bottom HDD plate upside down with the power and data connectors facing the rear of the DVR. Insert 4x hard drive screws per HDD.



4 Connect the power and data connectors.

5 Slide the top HDD plate in at the angle shown and lower into place.



6 Replace the center beam screw.

Step 2B of 3: Install hard drives 1~4:

1 Place the HDD(s) under the top HDD plate upside down with the power and data connectors facing the rear of the DVR. Insert 4x hard drive screws per HDD.

2 Connect the power and data connectors.

Step 3 of 3: Replace the DVR cover:

1 Lower the DVR cover to the DVR 1/2" (2cm) away from the front panel and then slide the top cover into place.

2 Replace the rear panel screws (2x).

Formatting the Hard Drive

If you replace the pre-installed hard drive, it must be formatted in order to function properly with the system.

> **ATTENTION**: Formatting the HDD erases **all data** on the hard disk.
> **This step cannot be undone.**

To format the hard disk:

1 Right-click to open the Menu Bar and click the Main Menu button ( ).

2 Click **Device**.

3 Click the checkbox under **Select** to choose the drive you wish to reformat.

4 Click **Format HDD**.

5 When the warning window appears, click **OK**. Wait for the system to format the hard drive.

NOTE: You will notice that the size of the HDD and the free space are not the same. The system uses a portion of the disk space for the operating system and initialization. This is common in all security DVRs as well as computer hard drives.

Troubleshooting

When a malfunction occurs, it may not be serious and can be corrected easily. The following describes the most common problems and solutions. Please refer to the following before calling FLIR Visible Technical Support:

Error	Possible Causes	Solutions
• System is not receiving power, or is not powering up	• Cable from power adapter is loose or is unplugged	• Confirm that all cables are connected correctly • Confirm that the power adapter is securely connected to the back of the unit
	• Power switch is set to OFF (•) position	• Confirm that the power switch is in the ON (**I**) position.

	• Cables are connected, but system is not receiving sufficient power	• Confirm that the system is powered on (LED indicators on the front should be ON)
		• If the unit is connected through a power bar or surge protector, try bypassing the bar and connecting the power directly to the wall outlet
		• Confirm that there is power at the outlet:
		  • Connect the power cable to another outlet
		  • Test the outlet with another device (such as a lamp or phone charger)

• Remote control is not detected by the system	• Battery in the remote control is drained	• Install two fresh AAA alkaline batteries in the remote control
	• There are no batteries in the remote control	
• Hard drive is not detected by the system	• Hard drive cables are loose or not properly connected	• Remove the housing and check that hard drive cables are firmly connected
	• There is no hard drive in the system	• Open the housing and install a 2.5" or 3.5" SATA hard drive. Make sure to format the drive after installing. For details, see “Configuring Hard Drive settings” on page 47.
• Hard drive is full (0%) and the unit is no longer recording	• Overwrite is not enabled	• From the Main Menu, select DEVICE>HDD. Select Auto under Overwrite and click Apply.

Troubleshooting (Continued)

Error	Possible Causes	Solutions
• There is no picture on monitor/TV after connecting it to the DVR	• Monitor/TV not detected by DVR	• Power off the monitor/TV and DVR. Power on the monitor/TV, and then power on the DVR
	• Input channel for DVR not selected on monitor/TV	• On the monitor/TV, select the input channel the DVR is connected to
	• Video cable is loose or has become disconnected	• Check the video cable connection to the DVR and monitor/TV
	• Video-out resolution has been set to the incorrect setting	• Press and hold the Stop button on the remote control until the DVR restarts. The DVR will reset to the default resolution (1024x768)
• Mouse not detected by system	• Mouse cable is not firmly connected to the system	• Firmly connect the mouse cable to one of the USB ports
	• Mouse is not connected to the system	
	• System needs to be reset	• Power off the system (disconnect power cable). Firmly connect a USB mouse to one of the USB ports. Reconnect the power cable to the DC 12V port on the rear panel.
• There is no picture on selected channels / camera picture is not being displayed	• Camera cables are loose or have become disconnected	• Check the camera video cable and connections • Disconnect and reconnect the cable at the system and at the camera • Try moving the camera to another channel or use another cable
• The image on the DVR appears, but does not have sound	• Audio cables are loose or have been disconnected	• Check the AUDIO Input connections to the DVR
	• Volume on external speakers (not included) is low or off	• Increase volume on external speakers (not included)
• The system beeps at startup		• The beep at startup is normal
• The system beeps during motion detection	• Motion detection is enabled and the alarm buzzer is activated	• Open the Main Menu and click System→Motion. In the Buzzer drop-down, select Off. Click Apply
• I am not receiving email notifications	• Email notification is disabled	• Ensure you have configured email notification. For details, see “Setting up Email Notification” on page 45

Troubleshooting Remote Connections

Error	Possible Causes	Solutions
• Cannot connect to the DVR on a local network	• DVR not connected to router	• Connect an Ethernet cable from the DVR LAN port to your router, and then reset the DVR using the power switch
	• DVR and computer not on same network	• Ensure your DVR and computer are connected to the same router • If your computer is using a WiFi network, try connecting it to the router using an Ethernet cable
• Cannot connect to the DVR over the Internet	• Ports not forwarded	• Port Forward the HTTP port (default: 80) and Client Port (default: 9000).
	• DDNS account not created	• Follow the instructions under "Step 2 of 4: Create a DDNS Account" on page 57
	• DDNS not enabled on DVR	• Follow the instructions under "Step 3 of 4: Enable DDNS on the DVR" on page 58
	• DDNS address not entered correctly	• In Internet Explorer or Safari, enter http://, the DDNS domain name from the confirmation email in full, and then colon and HTTP port (for example, http://tomsmith.myddns-flir.com:80)
• Cannot connect to the DVR using a mobile device	• DVR has not been configured for Internet connection	• Ensure you have followed all the steps in "Setting up your DVR for Remote Connectivity" on page 53. See above to troubleshoot remote connections
	• Client Port has not been forwarded	• Forward the Client Port (default: 9000) on your router.
	• IP address used from outside internal network	• Use the DDNS address to connect to the DVR using a mobile application
	• Router is blocking DDNS connection from internal network	• Turn off WiFi connection and attempt to connect using 3G or mobile network

Need Help?

Please make sure to visit our website **www.flirsecurity.com/pro** to receive product updates and information.

3 Easy Ways To Contact Us

Online:

Product support is available 24/7 including product information, user manuals, quick start up guides and FAQ's at **www.flirsecurity.com/pro**

By Email:

Technical support (for technical/installation issues)
visibletech@flir.com

By Phone:

North America: 1-866-816-5919
Technical support (for technical/installation issues)
Mon-Fri 8.00 am to 8.00pm EST

We welcome your feedback at
visibleinfo@flir.com

For more information, visit
www.flirsecurity.com/pro

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